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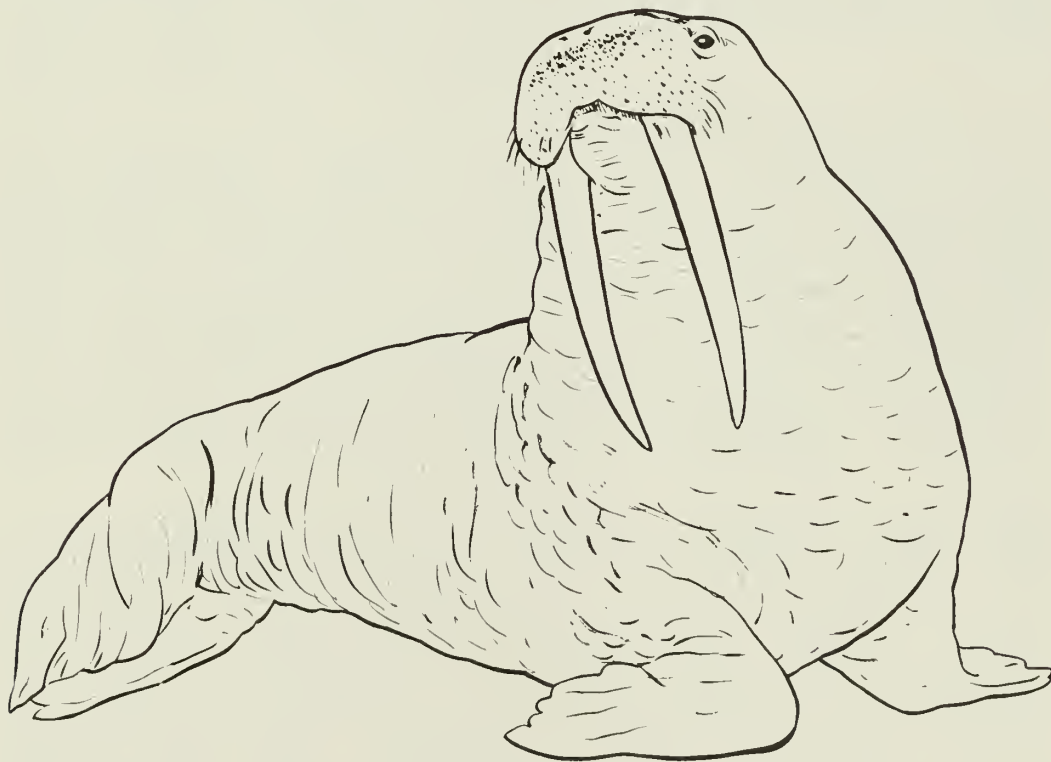
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# CAPE KRUSENSTERN

NATIONAL MONUMENT



DRAFT GENERAL MANAGEMENT PLAN AND ENVIRONMENTAL ASSESSMENT  
LAND PROTECTION PLAN • WILDERNESS SUITABILITY REVIEW





## SUMMARY

The draft general management plan for Cape Krusenstern National Monument presents alternatives for planning and management for the monument for the next ten years. Similar plans are simultaneously being written and publicly reviewed for Kobuk Valley National Park and the Noatak National Preserve.

There are two alternatives for management presented in Chapter 3. Alternative 1 (the preferred alternative) calls for increased staff and funding, expanded facilities for administrative offices, construction of government housing and a small aircraft facility in Kotzebue. It calls on the National Park Service to initiate research in several areas including cultural and natural resources, subsistence, and other public uses. It further recommends initiating several new cooperative agreements for management and research. This alternative also proposes to file for reservation of in-stream flow water rights, to expand opportunities in Kotzebue to pass out interpretive information to the public, and to encourage a new cooperative museum for Northwest Alaska in Kotzebue.

Alternative 2 (the Status Quo alternative) differs by not proposing increases in staff, or expansion of administrative office space, the construction of government housing or an aircraft facility. The National Park Service would initiate less new research and no new cooperative agreements unless other duties of existing staff diminish and enable these tasks to be undertaken. Filing for in-stream water rights would not occur, nor would there be expanded opportunities for interpretive information to reach the public in Kotzebue. No effort would be put forth for a cooperative museum in Kotzebue.

The land protection plan proposes to protect resources of significant value on private lands within the boundaries of the monument by a variety of methods. In the heart of the monument, at Cape Krusenstern, the National Park Service would acquire fee simple interest in Native allotments where significant cultural resources are known to be on the property. Additional research must be undertaken before this could occur. Acquisition could include all or a portion of an individual's allotment. Whenever possible, acquisition would occur on a willing-seller willing-buyer basis. Other recommended methods of protection include the Alaska Land Bank, cooperative agreements, acquisition of conservation easements and relinquishment of selections by Native corporations.

The section on environmental consequences discusses the impacts of the alternatives presented in this document.

The wilderness suitability review portion of the plan finds virtually all federal lands within the monument suitable for inclusion in the National Wilderness System.

Readers of this draft are encouraged to review the entire document so that sections can be viewed in the context of the whole plan.

CAPE KRUSENSTERN NATIONAL MONUMENT  
DRAFT GENERAL MANAGEMENT PLAN

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Coastal fog at Cape Krusenstern.



Cape Krusenstern.



Krusenstern Lagoon.





View of Cape Krusenstern. Krusenstern Lagoon to the left.



Rye grass along beach ridges of Krusenstern Lagoon.



Eskimo woman trimming seal intestines.



## DOCUMENT ORGANIZATION:

The Cape Krusenstern National Monument Draft General Management Plan is divided into ten chapters.

### Chapter 1 INTRODUCTION

Explains why the general management plan is being done, what the management objectives of the monument are, what issues have been identified in the planning and public involvement processes and provides a brief regional overview.

### Chapter 2 AFFECTED ENVIRONMENT

Describes the cultural and natural resources found within and adjacent to the monument. Summarizes the socioeconomic characteristics of the region including descriptions of activities and uses that occurred prior to the passage of the Alaska National Interest Lands Conservation Act (ANILCA). Additionally, it discusses proposed activities that could affect the resources within the monument.

### Chapter 3 THE PLAN

Contains two alternatives for management of the monument, its resources, public uses, subsistence uses, facilities and their development, operations and administration of the monument.

### Chapter 4 LAND PROTECTION PLAN

Explains options and recommends priorities and methods for protection of federal lands within the monument from activities, that might take place on private lands, within or adjacent to the monument that could cause harm or threaten the monument's resources.

### Chapter 5 IMPLEMENTATION

Presents implementation checklists of proposals contained within this draft plan.

### Chapter 6 ENVIRONMENTAL CONSEQUENCES

Discussion of environmental impacts that would be expected to occur if alternatives presented in this plan were implemented.

### Chapter 7 WILDERNESS SUITABILITY REVIEW

Analyzes the suitability of non-wilderness lands in federal ownership within the monument, and those lands that could come under National Park Service jurisdiction, for potential inclusion into the National Wilderness Preservation System.

#### Chapter 8 APPENDICES

Selected documents which are prepared as appendices to the plan or documents which are reprinted in whole or part for convenience of the reviewer.

#### Chapter 9 BIBLIOGRAPHY

List of all reference material used to write the draft general management plan and all other parts of this publication.

#### Chapter 10 PLANNING TEAM, CONSULTANTS AND CONTRIBUTORS

List of planning team members, consultants and those who contributed to this document.



## INTRODUCTION





## CHAPTER 1

### INTRODUCTION

#### Mandates for Management of the Monument

Cape Krusenstern National Monument was established in 1978 by Presidential Proclamation and reconfirmed by the 1980 Alaska National Interest Lands Conservation Act (ANILCA), 16 U.S.C. 3101. Section 201(3) of ANILCA specifies that:

The monument shall be managed for the following purposes, among others: To protect and interpret a series of archeological sites depicting every known cultural period in arctic Alaska; to provide for scientific study of the process of human population of the area from the Asian continent; in cooperation with Native Alaskans, to preserve and interpret evidence of prehistoric and historic Native cultures; to protect habitat for seals and other marine mammals; to protect habitat for and populations of, birds and other wildlife, and fish resources; and to protect the viability of subsistence resources. Subsistence uses by local residents shall be permitted in the monument in accordance with the provisions of Title VIII (of ANILCA).

Many other sections of ANILCA are directly applicable to the management of the monument; a discussion of them, is included throughout this document.

Section 203 of ANILCA directs that Cape Krusenstern National Monument be administered as a new area of the National Park System, pursuant to the provisions of the organic act of the National Park Service (39 Stat. 535), as amended. Management and use of all units of the National Park System are also directed by Title 36, Chapter 1, Code of Federal Regulations, some of which are specific to National Park System units in Alaska, and by National Park Service policies and guidelines.

#### Management Objectives

A "Statement for Management" for Cape Krusenstern National Monument was approved in January 1984. This document guides all subsequent planning (including this draft general management plan) and management of the monument. The statement for management is subject to public review and comment and will be updated

periodically. Objectives for management of the monument are included in Appendix E.

### Monument Issues and Concerns

The major issues concerning Cape Krusenstern National Monument were developed after numerous interviews with individuals in Northwest Alaska and others throughout the state. Additionally, a series of public meetings held throughout Northwest Alaska in May of 1984 provided an in depth look into the immediate and long range concerns of many local citizens. Major issues facing the National Park Service in the management of Cape Krusenstern National Monument include:

1. Nationally and internationally significant archeological resources in the monument are located on private land and other land likely to be conveyed to private ownership. Questions have arisen as to how the National Park Service intends to provide adequate protection for these resources without causing inconveniences to or problems for private landowners.

2. ANILCA mandates that the National Park Service shall protect the opportunities for continuation of subsistence activities, some of which take place at times and locations where recreational users from outside the region visit. The issue revolves around means of accomodating subsistence and recreational users and preventing conflicts from arising so that restrictions are unnecessary.

3. The National Park Service must deal with the issue of deciding the best approach and methods to be used in managing the nationally and internationally significant cultural resources in the monument.

4. Because ANILCA mandates that opportunities for continuation of subsistence activities in the monument continue, questions are asked that give rise to the issue of what approach the National Park Service will take and what methods it will use to manage the monument's natural resources, particularly those harvested by subsistence users.

5. Monument users have expressed concern about current access privileges. The National Park Service recognizes the importance of the legislative responsibility to provide adequate access to the monument. It is also important that monument resources be protected--not only in accordance with the provisions of ANILCA, but also in accordance with the provisions of other laws, regulations, and policies applicable to the National Park System. The issue revolves around protecting resources and affording adequate and appropriate access to accommodate a variety of users including those owning land within the monument.



6. Because of a variety of mandates, regulations, and policies, the National Park Service must deal with the issue of deciding the approaches to be taken and the methods to be used in managing recreational uses of the monument.

7. The Red Dog mining proposal calls for the construction of a road, port facilities, ore storage facility, housing with accompanying support facilities, and for mining operations employing approximately 400 persons. Because Title XI of ANILCA permits under certain circumstances a transportation system in and across conservation system units, much of the proposed road would be on federal land and would necessitate additional Park Service personnel to monitor its use and impacts, if not to manage it more extensively.

These circumstances have caused NANA, the Native regional corporation, to approach the National Park Service and propose a land exchange. The proposed exchange would allow placement of facilities and the road corridor on private land within the monument boundary. Whether the road corridor results from the land exchange or from employing provisions of Title XI of ANILCA, the issue for the National Park Service is what appropriate management actions to take in response to the proposed road and mining operations.

Alternatives for management which offers resolution to these issues are discussed in Chapters 3 and 4. A summary chart of those alternatives and their relationship to the issues are on page 3-52.

#### Planning Process and Public Involvement

ANILCA section 1301 requires that a conservation and management plan be written for Cape Krusenstern National Monument. This plan fulfills that legal requirement. It is expected to remain valid for ten years. It identifies management practices which carry out the requirements of ANILCA and the National Park Service Organic Act including a description of proposed management programs and methods, proposed development areas, and proposed access and circulation plans. ANILCA requires that the following factors, among others, be considered when developing a management plan for Cape Krusenstern National Monument:

(1) Specific purposes for which the monument was established.

(2) Potential methods of protection and preservation of the cultural, archeological, historical, ecological, environmental, wildlife, geological, recreational, wilderness, and scenic character of the monument and of areas in the vicinity of the monument.

(3) The potential for providing opportunities for local rural residents, including Alaska natives, residing in the monument and areas adjacent to it to continue using the area as they have traditionally done.

(4) The nature and extent of activities occurring in the monument and in areas adjacent to, or surrounded by the monument.

The planning process for the Cape Krusenstern National Monument General Management Plan was initiated in March, 1984, with an announcement in the Federal Register and, a general scoping meeting in Anchorage to identify issues that should be addressed in the general management plan. In April and May, public meetings were held in Kivalina, Noatak, Kobuk, Shungnak, Selawik, Noorvik, Deering, Ambler and Buckland and in Kotzebue in June. All of these meetings enabled the superintendent and planners to answer questions and more fully understand people's concerns relating to the establishment of the monument and to its current and future management.

Also during March 1984 the planning team began researching existing data about the region and the monument. Contact was made with the of Alaska Departments of Fish and Game, Natural Resources, Transportation and Public Facilities, Commerce and Economic Development, and Office of Management and Budget, the Citizen's Advisory Commission on Federal Areas, NANA Regional Corporation (NANA), Kikiktagruk Inupiat Corporation (KIC), Alaska Federation of Natives, NANA Coastal Resources Service Area, Maniilaq Association, the Resource Development Council, and the Audubon Society. A newsletter on the plan was published in July 1984.

Additional public meetings on the draft general management plan will be held in the vicinity of the monument and in a metropolitan area of Alaska. In addition, consultation will continue with the Alaska Land Use Council, federal, state and local agencies, Native corporations, and concerned local, state, and national organizations and interested individuals.

## REGIONAL OVERVIEW

### Surrounding Lands

Cape Krusenstern National Monument is in Northwest Alaska, approximately 450 miles northwest of Fairbanks and 10 miles northwest of Kotzebue. The monument is bordered by the Chukchi Sea on the west and Kotzebue Sound on the south. To the north and east are the river drainages of the Wulik and Noatak rivers.

Lands and waters surrounding the monument are managed by several governmental agencies, private corporations and individuals. To the north and northeast of the monument is a mixture of selected, tentatively approved and patented state land, and selected, interimly conveyed and patented Native corporations lands. The village of Kivalina lies approximately 10 miles northwest of the northern boundary.

Immediately to the east of the monument are lands managed by the Bureau of Land Management (BLM) and further east along the Noatak River are lands selected by Native corporations. The village of Noatak is approximately nine miles east of the monument and Noatak National Preserve lies some ten miles east of the monument, at its closest point.

All of the surrounding non-parklands are available for a variety of potential uses. Under current BLM management, the lands immediately east of the monument are open to mineral entry. The proposed Red Dog Mine is the only major active proposal at this time which could significantly affect the monument and its resources. The Red Dog Mine proposal could be carried out only after a land exchange occurs or through provisions of ANILCA Title XI which would provide a right-of-way through the monument to the coast. Potential developments could include a road 57 miles in length, 25 miles of which would be in the monument. Also inside the boundaries would be an ore storage facility and a port site. An accommodation center and the mine itself are to be located 25 miles northeast of the monument.

#### Brief Description of the Monument

North of Kotzebue and above the Arctic Circle the monument is comprised of 659,807 acres of land and water. It is characterized by a coastal plain dotted with sizable lagoons and backed by gently rolling limestone hills. On the east, the coastal plain meets an ancient sea cliff now mantled with tundra and blue-gray limestone rubble. In the southeast portion of the monument the highest point is found, Mount Noak, 2010 feet in height.

The cape's bluffs and its series of 114 beach ridges show the changing shorelines of the Chuckchi Sea and contain a record in chronological order of an estimated 6,000 years of prehistoric and historic uses of Northwest Alaska's coastline, primarily by Native groups. Some of these archeological resources in the monument are older than the more well known remains of ancient Greek civilization found along the Mediterranean Sea. The beach ridges along the monument's coast are

known to contain exceptional resources for analyzing and interpreting the life cycles and technologies that insured human survival in the arctic for the last sixty centuries.

Along the shoreline of the monument shifting sea ice, ocean, currents and waves have formed, and continue to form spits and barrier islands which are considered valuable for their scientific, cultural, and scenic values. These same oceanic forces are integral parts of the dynamic nature of the beach ridges and the annual openings and closings of lagoon outlets.

The broad plain separating the hills of the cape from those in the northern sector of the monument comprises the tundra-covered bed of an Illinoisan glacier formed 250,000 years ago and the former (now dry) course of the Noatak River. Pingos, eskers, frost polygons, thermokarst lakes, and ice lenses are tundra forms found in the monument.

Five complete, though small, arctic river systems are important resources that influence the dynamics of the monument's ecosystem.

#### Access to the Region

Northwestern Alaska is not connected to the state's road system. Daily commercial jet flights connect Anchorage to Kotzebue, the largest community in the region. From Kotzebue access to the monument is by aircraft or boat; in winter during periods of adequate sea ice, access by snowmachine, 3-wheeler all terrain vehicle and dog sled is possible. Average flight time for a chartered aircraft to drop off passengers at Cape Krusenstern and return to Kotzebue is one hour. Aircraft land on public and private airstrips, beaches, tundra or if float-equipped, on lagoon waters. Extremely variable weather can and does curtail travel to and from the monument at any time of year.

# REGION

## Cape Krusenstern National Monument

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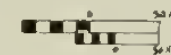


# REGION

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CAPE KRUSENSTERN  
NATIONAL MONUMENT



YELLOWSTONE  
NATIONAL PARK

## VICINITY

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## THE MONUMENT

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AFFECTED ENVIRONMENT



## CHAPTER 2

### AFFECTED ENVIRONMENT

#### CULTURAL RESOURCES

The monument's resources are a combination of dynamic and interacting elements. Following the description of each element a brief list of "implications" for planning and or management of the monument is presented.

##### Prehistoric

Northwest Alaska in general and the monument specifically is not the empty, trackless wilderness that many people might perceive it to be. Humans have continuously explored and lived here and utilized its resources for more than 12,500 years. In fact it is the preservation of the remains of these people's lives, their houses, tools and artifacts that create a major reason for the existence of the monument. Cape Krusenstern National Monument contains some of the most important prehistoric sites in the Arctic.

It has been well established (Hopkins 1967, 1982) that the great continental glaciers of the last ice age locked up vast amounts of water as ice. As a result sea levels were lowered, exposing a large land mass called Beringia, more than 1,000 miles wide at one point and which functioned as a land bridge between Alaska and Siberia and was above sea level from 25,000 to 14,000 years ago. Although the rising seas broke through about 14,000 years ago (Anderson, 1981), the present sea levels were not reached until 4,500 years ago.

Even today, the Bering Strait, about 90 miles wide, is easily crossed and is not really a barrier to human passage, especially in winter when choked with ice. It was across the Bering Land Bridge and later across the inundated strait itself, that successive cultural groups of people entered Northwest Alaska. Some groups continued on, eventually spreading over the face of the New World, all the way to the tip of South America. Other groups stayed to explore, settle and adapt to Alaska and the Arctic. The prehistoric record of Northwest Alaska contains the story of this process. However, our knowledge of the regional prehistory is hampered by lack of information. Much of the area has not been thoroughly investigated. The Cape Krusenstern area in the monument along with Onion Portage in Kobuk Valley National Monument provide the best information available about Northwest Alaska prehistory, though more

can still be learned at the cape, elsewhere in the monument, and in the region.

The archeological record in the monument reveals several main streams of cultural development and adaptation in Northwest Alaska. The earliest people, the Paleo-Arctic tradition (a tundra culture), arrived in the region 12,500 or more years ago. Traces of their presence are few. We do know that they came from northern Asia and were nomadic hunters and gatherers, living off the land and traveling in small groups. Unlike many later groups, these early people did not depend on sea mammal hunting for their subsistence, but depended on caribou and other land animals (Anderson 1981). (See Cultural Sequence graph page 2-5)

The next wave of people apparently moved into Northwest Alaska from the forested regions to the south and east. These Northern Archaic folk, arriving about 6,500 years ago, with a distinctively different material culture, apparently depended on caribou and fishing in rivers and streams for their livelihood, staying inland and near tree line most of the time. Because of their interior origin many archeologists consider that these people represent an Indian culture rather than an Eskimo-type one.

Around 4,200 years ago arctic-oriented cultures again appeared on the scene in Northwest Alaska. Either a new wave of people or new ideas swept into Alaska from Asia. This Arctic Small Tool tradition, named after their finely made stone tools, was a dynamic one, adapting to make efficient use of a wide range of arctic resources. The earliest culture of this tradition (the Denbigh Flint people) spread as far south as Bristol Bay and as far east as Greenland, occupying interior and coastal areas.

The spread of Arctic Small Tool tradition people throughout arctic Canada, the first to do so, and their long timespan (the tradition lasted over 1,000 years) shows that they were adept at the use of resources both along the coast and in the interior. Major settlements have been found in coastal areas in the region, like the beach ridges at Cape Krusenstern and the Choris Peninsula which is the home of the Choris people who were direct descendents of the Denbigh people.

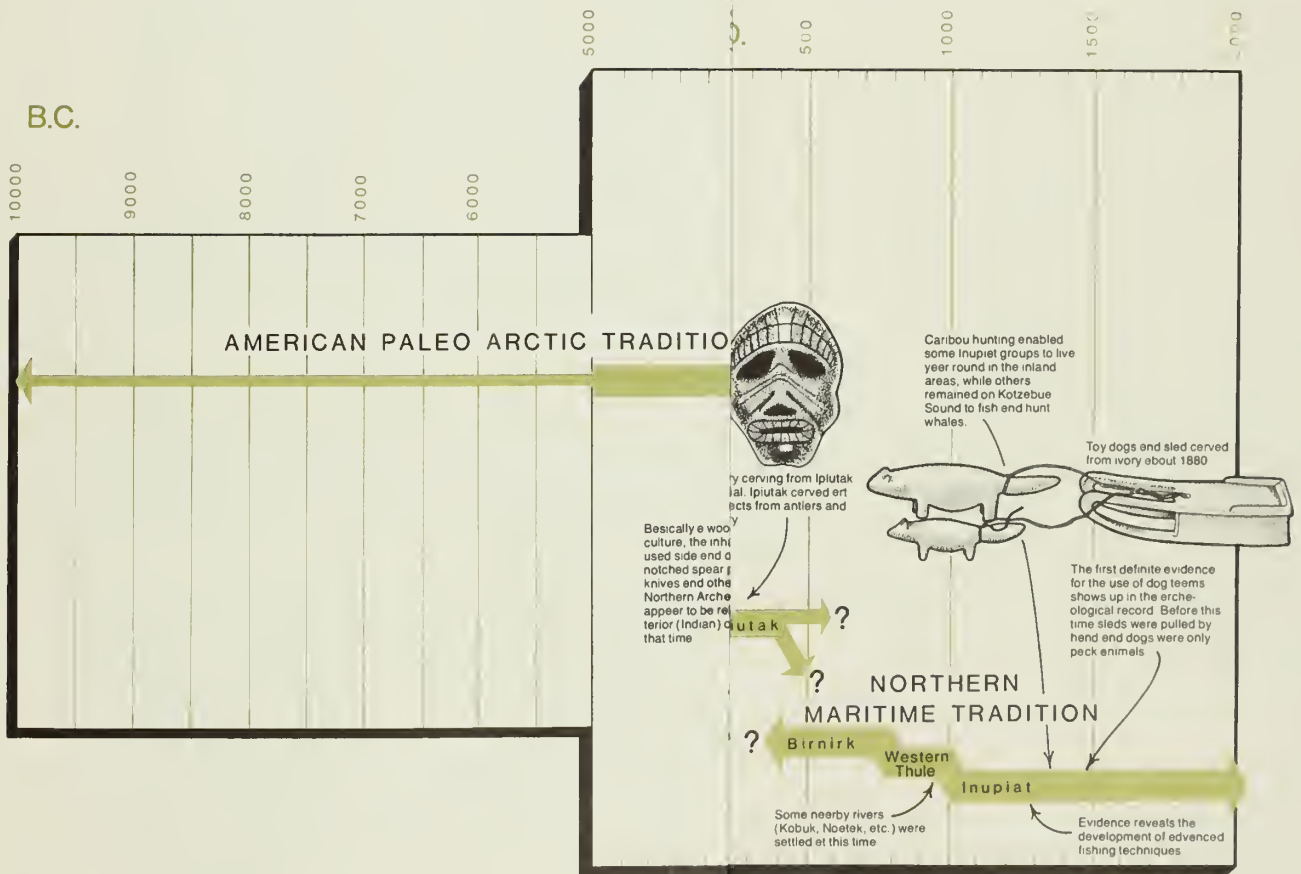
By about 2500 years ago people of the Arctic Small Tool tradition and the related Norton/Ipiutak tradition had shifted much of their emphasis to coastal living and use of marine resources. There are some indications that whaling had begun and was gaining importance. Interior resources, such as caribou, from the tundra and the



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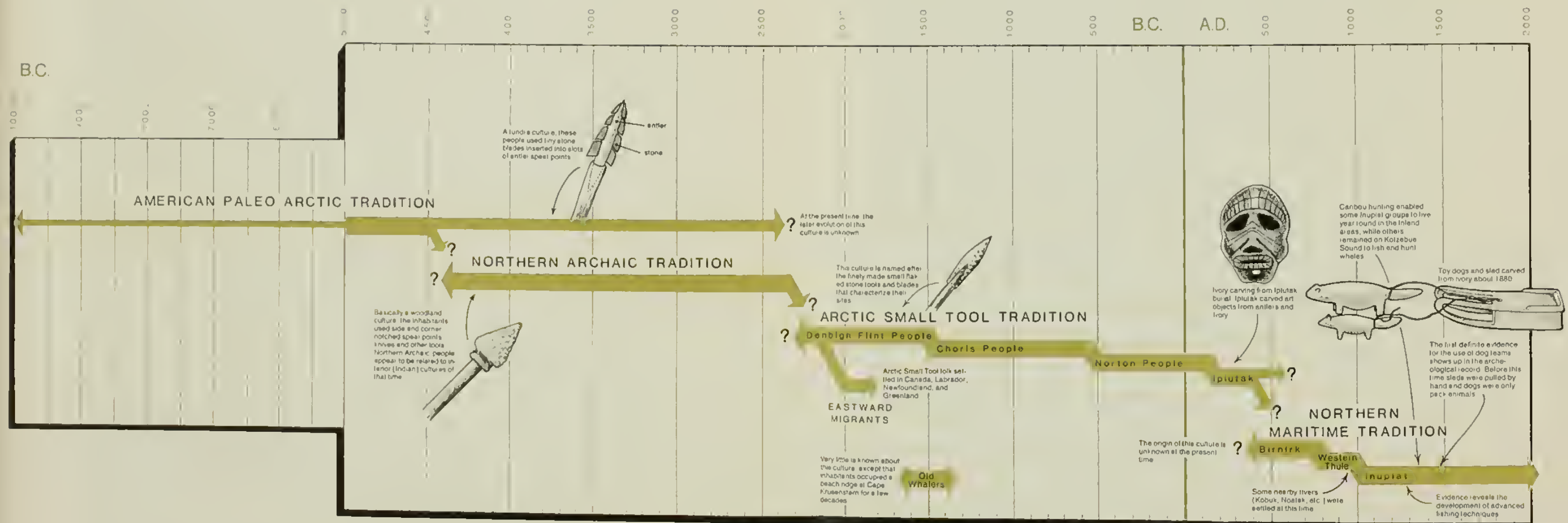


(Adapted from Anderson, 1981: 56)

# ARCHEOLOGICAL CULTURAL SEQUENCE IN NORTHWEST ALASKA

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forest were still sought and used extensively. Norton settlements sprang up in most productive coastal locations from the Alaska Peninsula around to a point east of the U.S.-Canada border. Fishing with seine nets became a primary source of food. The later Ipiutak people developed an advanced art style based upon ivory carving.

Around 1600 years ago a new cultural group appeared. It is not known whether these folk came from Asia or developed from the earlier arctic peoples in Alaska. Whatever their origins, these people developed the full-fledged Eskimo lifestyle of utilizing marine resources such as seal, walrus and whale as well as interior resources such as caribou and musk ox. These people of the Northern Maritime Tradition developed from the Birnirk culture into the Western Thule culture which spread all across the Arctic from Norton Sound to Greenland. From the Western Thule culture came the modern Eskimo, the Inupiaq (identifiable in the archeological record by around 900 years ago). The Inupiaq developed or used advanced fishing and hunting techniques such as the drag float and the sinew-backed bow. The first archeological evidence for the use of dogs to pull sleds shows up by 500 years ago. Before this, sleds were pulled by people and dogs were used as pack animals. Some people moved inland full time; others moved to the rivers (i.e., the Arctic Woodland Culture on the Kobuk River) and developed more specialized lifestyles. However, extensive trading networks were maintained throughout Northwest Alaska.

In the late 1800's, when contacts with the outside world were significant, the fur trade expanded in economic importance and the use of sophisticated dog sledding methods became common. These concurrent developments allowed greater mobility and resulted in people spreading out over larger areas in winter.

The traditional lifestyles of the Inupiaq remained fairly stable until about 1850 A.D. Russian trade goods had reached Northwest Alaska during the 18th century through trade with Siberian peoples across the Bering Strait, but had not significantly affected local people. Eskimo culture began to change significantly in response to outside contact after 1850. It wasn't until schools, post offices and trading posts were set up around 1900 that large villages were again established (Anderson 1981:57).

Because of the national and international significance of prehistoric sites in Cape Krusenstern National Monument they have been protected through designation as a National Historic Landmark and National Register

Archeological District in 1973. It should be noted that the landmark and district boundary encompasses an area much larger than that of the monument. The monument has also been nominated to the World Heritage List of Cultural Parks and could be only the second U.S. National Park on the world cultural list. (See Cultural Resources map page 2-9)

Within the boundaries of the monument, 16 Alaska Native Claims Settlement Act (ANCSA) 14(h)(1) sites, (Native cemetery and historic sites) have been identified and selected by NANA. (See Cultural Resources map page 2-9)

The core of the archeologic district lies in the monument at Cape Krusenstern where the complex of approximately 114 marine beach ridges occur. These beach ridges run roughly east-west, parallel to the present shoreline. They are composed of alluvium, rise only about 10 feet above sea level, extend from 1 1/2 to 3 miles outward toward the sea and are about 9 miles long. These beach ridges, formed of gravel deposited by major storms, and regular wind and wave action, record in horizontal succession the major cultural periods of the Arctic over the last 4500 years. The prehistoric inhabitants of Northwest Alaska occupied the cape seasonally in order to hunt marine mammals, especially seals. As new beach ridges were formed, camps were made on the ridges closest to the water. Thus, over the centuries, a chronological "horizontal stratigraphy" was laid down in which the oldest cultural remains are found on the fossil beach ridges furthest from the ocean, with more recent remains and modern camps found on beach ridges, located closer to the water. The discoveries made at Cape Krusenstern, especially when used in conjunction with those at Onion Portage in Kobuk Valley National Park, provide a definite, datable outline of cultural succession and development in Northwest Alaska.

The present coastline in the monument is the center of the subsistence activities of present-day users from Kotzebue, Noatak, Kivalina and the general area around the monument. Immediately behind the active shoreline at Cape Krusenstern, the first eight beach ridges contain evidence of the presence of modern to late prehistoric Inupiaq, dating back to about 600 years ago. Beaches 9 through 44, dating from about 1000 to 2400 years ago, contain in sequence, remains of campsites, house ruins and artifacts of the Western Thule, Birnirk, Ipiutak and Norton cultures. The Birnirk and Western Thule cultures, which are part of the Northern Maritime tradition, evolved directly into the present-day Inupiat cultures of the Arctic.

# CULTURAL RESOURCES

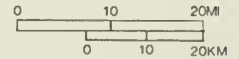
Cape Krusenstern  
National Monument

Kobuk Valley National Park

Noatak National Preserve

United States Department of the Interior  
National Park Service

189 80010  
ARO JUL84



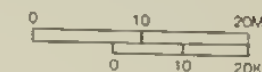
SOURCE NATIONAL PARK SERVICE.  
ALASKA REGIONAL OFFICE. 1984

# CULTURAL RESOURCES

Cape Krusenstern  
National Monument  
Kobuk Valley National Park  
Noatak National Preserve

United States Department of the Interior  
National Park Service

189 800 10  
ARO JUL 84



SOURCE NATIONAL PARK SERVICE,  
ALASKA REGIONAL OFFICE, 1984



The next group of beaches exhibit campsites of several stages of the Choris culture, dating from 2500 to 3500 years ago.

On beach 53, Giddings (1967) found the ruins of winter and summer houses of a unique whale-hunting group with large stone tools and weapons never found before or since anywhere else. Named the Old Whaling Culture, it dates from around 3500 years ago and represents the earliest evidence in Northwestern Alaska of year-round coastal life (Anderson 1977).

The oldest beaches contain evidence of the Denbigh culture, a remarkable stone-working complex that epitomizes the Arctic Small-Tool tradition. These people produced some of the most finely made stone tools ever found. Denbigh artifacts are related not only to those found in regions to the south (as far as Bristol Bay) and east (as far as Greenland) but also to cultural complexes in Siberia. At Cape Krusenstern, ridges 78 to 80 exhibit artifacts of an early Denbigh phase (4500 years ago) while the inner beaches, 83 to 104, have those dating from around 5000 years ago.

The prehistoric cultural resources of the monument are not limited to the beach ridges but may be found throughout the area. In northwestern Alaska the only existing shore edge features dating to earlier than 5000 years ago (when the post-Pleistocene sea levels stopped rising), are the higher sea cliffs. It is on these that earlier coastal archeological sites may be found. In the monument these cliffs exist only at Battle Rock, the western face of the Kakagrak Hills and the bluffs around Ingitkalik Mountain.

Major sites have been found at several of these locations. One of these is the Lower Bench site. Two benches extend from Ingitkalik Mountain on the northeast shore of Krusenstern Lagoon. They probably represent ancient shorelines formed before the beach ridges. On the lower bench, J.L. Giddings found a site that he dated around 3500 B.C., just slightly older than the inner beach ridges, and possibly from the Denbigh culture. Anderson (1977) feels that this site could be even older, anywhere from 4500 to 8000 years in age. Higher up on the slopes of the mountain, Giddings found another site, called the Palisades site. Two components were identified. One of them, Palisades II, is at least 6000 years old and is part of the Northern Archaic tradition. Related sites have been found at Onion Portage on the Kobuk River and Anaktuvuk Pass (the Tuktu site) in the Brooks Range. This tradition appears to be a culture related to interior, forested Alaska that expanded to the north and west for a short period of

time about 8000 years ago. The other component, Palisades I, could contain the oldest cultural material in the monument (Giddings thought so), but further investigation is needed before its full significance is determined.

The coast north of the cape and the drainages flowing to it comprise a nearly continuous archeological zone whose resources have only been partially investigated. The density of site occurrence appears to be less than at the Cape and at Sheshalik spit, but they are equally important because they represent a different part of the life cycle and seasonal rounds of the early inhabitants. The most significant of these sites was found by Giddings in 1967 on a rounded coastal limestone outcropping with a thin tundra sod. It was called Battle Rock by him because it was the location of a legendary fight between people from the Cape and Point Hope. However, its history proved to be more complex than that. Stone-lined graves from the Western Thule or related cultures were found. Also there was evidence that people of the Arctic Small Tool tradition cultures (Ipiutak, Choris, Norton and Denbigh) had used Battle Rock. In addition to this, the remains of a large stone-lined multiple burial containing the parts of more than one human skeleton, as well as other artifacts including 300 antler projectile points. It was assigned to a unique complex and named the Battle Rock phase (Giddings 1967). This phase is probably related to the Norton culture (of the Arctic Small Tool tradition) but has some intriguing differences that need further research and interpretation.

More recent surveys of the northern part of the monument (Anderson 1967, Hall 1983) indicate that there are more sites scattered over the non-coastal areas. Sites founded by Anderson on Rabbit Creek and New Heart Creek indicate a long term use of that area extending over several thousand years from pre-Denbigh times up to the late prehistoric period. Hall has found several more sites along the route of the proposed Red Dog mine road, including another stone-lined grave site and one from the Northern Archaic period (8000 years ago).

### Historic

Exploration and use of the Cape Krusenstern area by western civilization was preceded by more than 150 years of trade and contact along the coast of Northwest Alaska. Russian trade goods reached people of the Kotzebue Sound through extensive trade ties across the Bering Strait between the native people of eastern Siberia and those of northwestern Alaska. Several voyages of exploration opened the era of European



contact. In 1730 Michael Gvozdef and Ivan Fedorov reached the Diomed Islands and sailed along the Seward Peninsula. Both Bering (1741) and James Cook (1776) missed Kotzebue Sound on their voyages. It was Otto von Kotzebue who made the official discovery of the sound in 1816. He named the cape marking the northern entrance of the sound after his former commander, Admiral A.J. Krusenstern (Orth 1967). The explorer, Kotzebue, in 1816 noted permanent habitations at Cape Krusenstern. H.W. Elliott, in 1874, also reported the cape as occupied. In 1819 an American named Gray explored the area for John Jacob Astor, thereby establishing an American presence in the area. In 1820 G.S. Shishmaref surveyed the coast between Cape Krusenstern and Icy Cape. Captain F.W. Beechey from England entered Kotzebue Sound in 1826 and explored Hotham Inlet, which he named.

After this time, the increasingly frequent visits to the area by traders and whalers began to seriously affect the native way of life. Trading upset older habits and introduced new technologies, the reduction of the whale and caribou populations threatened the subsistence hunt, and diseases were introduced. When H. Zagoskin of the Russian Navy visited Kotzebue in 1842, he found that more than half the population there had died during the smallpox epidemic of 1838-39.

Between the mid and late 1800's interior country was penetrated by various military expeditions. Cantwell explored the Kobuk River and McLennan went up the Noatak. Further exploration in the area took place during the winter of 1885-86 when Stoney and his men explored the Kobuk River country and parts of the western Brooks Range. In 1897 a reindeer station was established in Kotzebue to offset the severe decline in the caribou population that was eroding the native way of life. In 1899 a post office made the name "Kotzebue" official, and the Society of Friends opened a mission and a school in town. The pressure for acculturation continued to grow. The desire for schooling, interest in Christianity and access to trade goods and work drew many people to Kotzebue to live. Seasonal use of the Krusenstern area continued, however, as people from Kotzebue, Kivalina and Noatak traveled there to harvest its marine and land resources. By 1958, when Giddings visited, the Cape was used only sporadically and seasonally (Giddings 1967).

Sheshalik Spit, which is at the southern end of the monument, has been heavily used for more than a century. It is extremely likely that an intensive archeological survey there would reveal evidence from earlier times. Today it is the most heavily used part of the monument,

with intensive subsistence activities occurring during much of the year, especially in the late spring and summer months.

Located near the outlet to Krusenstern Lagoon is the remains of an Alaska Road Commission mail cabin. The date of construction is presently unknown. Lacking a roof the cabin is rapidly deteriorating.

#### Implications

1.) The cultural resources in the monument have national and international significance which require the fullest attention available in the management of these resources.

2.) Because a base line survey has never been carried out to identify additional cultural resources within the monument and because the area's potential for discovery is so high it should be presumed that additional sites will be discovered.

3.) Existing pre-historic and historic sites offer an outstanding opportunity to interpret a variety of themes which revolve around the monument's cultural resources.

4.) Cultural resources in the monument are protected by a number of overlapping state and federal laws. These laws mandate various types of protection and mitigation actions in the event of certain actions or disturbance.

#### NATURAL RESOURCES

##### Climate

The climate of Cape Krusenstern is essentially maritime being influenced by the adjacent Kotzebue Sound and Chukchi Sea. Cloudy skies, frequent fog, westerly winds, and minor fluctuations in daily temperatures are normal. In October when offshore waters become frozen, a more continental climate prevails. Temperatures decrease dramatically and fluctuate over a greater range during the winter months.

Average daily temperatures for the summer months (June, July, August) at Kotzebue range from 43°F to 53°F, with the highest temperatures occurring in July. Temperature extremes have reached as high as 85°F during July of 1958 at Kotzebue, and as low as 20°F in June of 1948 (NOAA, 1982). The coldest months are from January until early March when average daily temperatures range between -4°F and 0°F. Temperature extremes at Kotzebue for the same period reached a low of -52°F in February of 1980 (NOAA, 1982).

During the winter months cold and wind chill effect lower temperatures dramatically and have a major influence on biological systems in the region and

require that persons outside take precautions against the cold. An air temperature of 0°F, for example influenced by a 15 mph wind, reduces the temperature to a wind chill of -30°F.

Precipitation at Kotzebue is light, with only about nine inches falling annually. More than half of this moisture falls between July and September when a warm, moist movement of air from the southwest predominates. August is the wettest month with a mean monthly precipitation of 2.26 inches. In total, precipitation occurs on the average 110 days of the year.

Snowfall can occur during ten months of the year, July and August usually being the exceptions. Annual snowfall averages less than 50 inches. An extreme high in monthly snowfall occurred during March of 1954 when 21.9 inches fell.

Winds are common in the monument, particularly along the coastline, with mean annual speeds of approximately 13 mph. Mean monthly winds at Kotzebue are above 12 mph from September until April and blow from the east. Cyclonic storms are frequent during this time and are often accompanied by blizzard conditions. Wind speeds of 100 mph can be experienced. Mean monthly wind speeds are comparable for the summer months but are from the west. Summer storms can cause coastal flooding in Kotzebue and other coastal communities.

The monument experiences extreme seasonal variations in daylight due to its northern location. The sky remains light for three continuous months per year in summer, while in midwinter, a diffuse light occurs for only two to three hours per day. Clear skies are experienced on approximately 95 days of each year, while cloud cover blankets the area on 70 days annually.

Freeze up at Kotzebue occurs generally in late October and breakup in late May or early June.

Climatic conditions including low temperatures and long seasons of light and darkness, play a major role in the lives of the area's inhabitants and visitors to the monument.

#### Implications

- 1.) Cold temperatures, the wind chill factor and other rigors of weather influence public use and safety in the monument.
- 2.) Similarly, the weather and its extremes will influence the monument's staff while performing all aspects of outdoor work. Intense cold will also effect the performance of machinery and all structures.

## Air Quality

While comprehensive data is not available for the monument, the air quality of the monument and surrounding area is considered to be excellent. Arctic haze occurs in the region but data is very scarce. The monument and surrounding area have a Class II air quality classification, which allows slight deterioration associated with moderate, well-controlled industrial and population growth. The lack of concentrated point sources of pollution and the fluxing of air, particularly along the coast, should deter the accumulation of air pollutants well into the future.

Implications Until systematic, on-site, air quality monitoring occurs no truly accurate base line data for the monument will be available.

## GEOLOGY

The basic geological framework of the Northwest Alaska region was set by the late Paleozoic era, 600 million years ago. (See Geological and Paleontological map page 2-17). During Triassic time, 225 million years ago, the site of the present Brooks Range was stabilized and limestone and chert were found. The process of mountain-building began during mid-Jurassic time.

Then, 135 million years ago, the mountains were intensely folded and faulted and the existing east-west fault trends within the area were established. In late Miocene time, 25 million years ago, seas flooded much of the formerly dry area of the Chukchi zone, but retreated somewhat to form a land bridge between Siberia and Alaska. This land area was again overlain by seas about 4 million years ago and remained so until approximately 1 million years ago.

The ice advances which occurred during Pleistocene time, 1 million years ago, caused a substantial drop in sea level and a consequent exposure of the land mass known as Beringia. Continental ice sheets did not cover all of Northwest Alaska at this time, although glaciers did encompass most upland areas.

The last retreat of the glaciers established the present sea level approximately 4,500 years ago.

Bedrock geology of the inland area north and east of the Krusenstern Lagoon, includes rocks from Precambrian to Devonian times. Limestone, dolomite, chert and phyllite are greatest in abundance. The southern extension of the Mulgrave Hills within the monument known as the Tahinichok Mountains contains dolomite, sandstone,



## PALEONTOLOGY

( FOSSIL COLLECTION SITES )

SITE 1. CONODONTS / RADIOLARIANS  
 SITE 2. CONODONTS / RADIOLARIANS  
 SITE 3. CONODONTS / RADIOLARIANS  
 SITE 4. BRACHIOPODS  
 SITE 5. CONODONTS  
 SITE 6. STROMATOPOROIDS / CORALS  
 SITE 7. CONODONTS  
 SITE 8. PLANTS (MESOZOIC)  
 SITE 9. CONODONTS  
 SITE 10. ECHINODERMS / BRACHIOPODS / SPONGE  
 SITE 11. CORALS / BRACHIOPODS / CONODONTS  
 SITE 12. RADIOLARIANS / PELECYPODS / CONODONTS  
 SITE 13. ECHINODERMS / CORALS / BRACHIOPODS

SITE 14. C  
 SITE 15. C  
 SITE 16. C  
 SITE 17. C  
 SITE 18. C  
 SITE 19. C  
 SITE 20. C

SOURCE  
 GEOLOGICAL  
 PART OF 1  
 TP MILL

SOURCE (FOR SITES 1-13) MF 1441, GEOLOGY OF THE  
 SINKTANNEYAK MOUNTAINS AND MT. OPHIOLITE,  
 HOWARD PASS QUAD, BY STEVEN W. NELSON AND  
 WILLIS H. NELSON, 1982

## GEOLOGY & PALEONTOLOGY

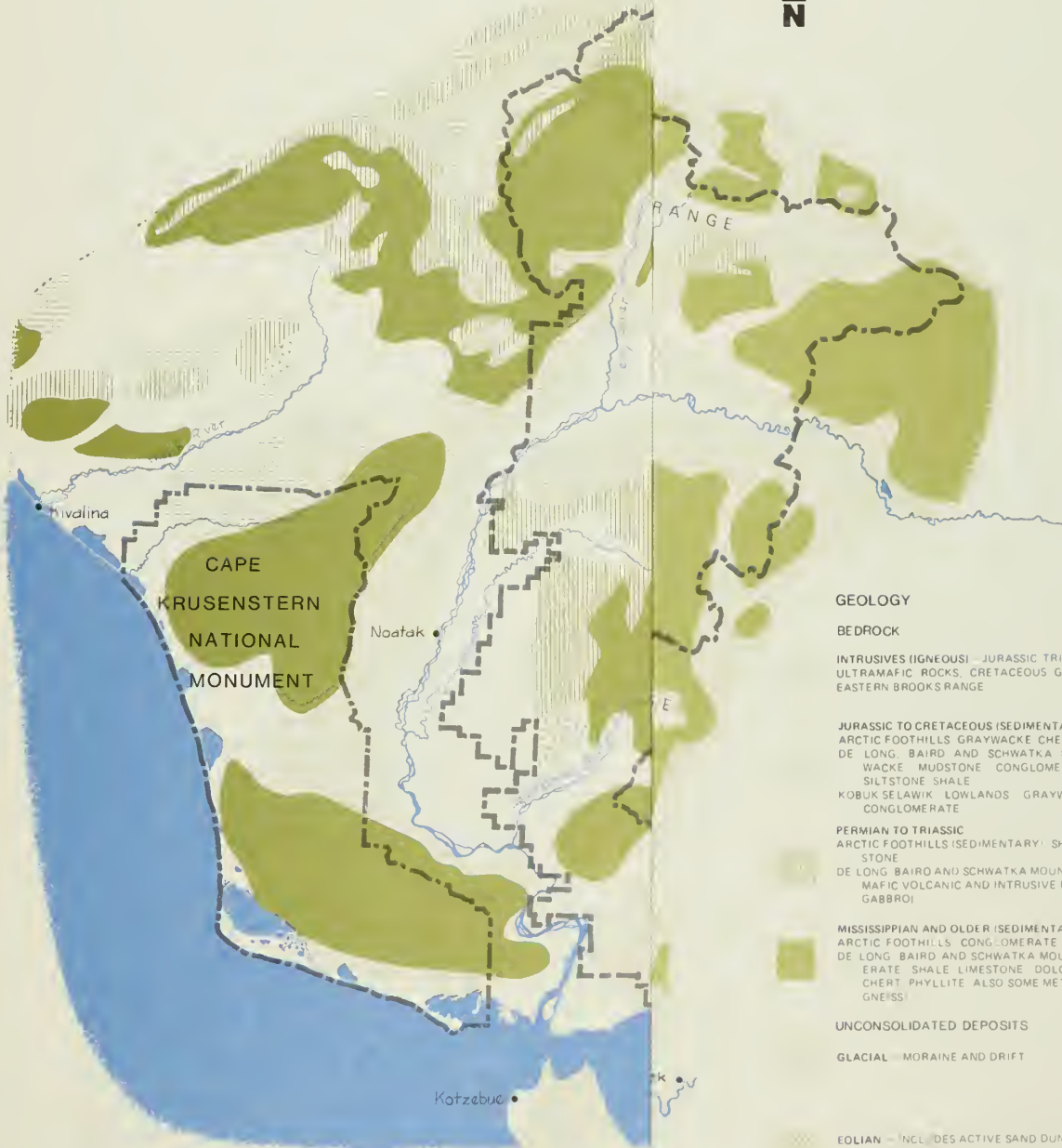
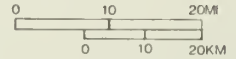
Cape Krusenstern  
 National Monument

Kobuk Valley National Park

Noatak National Preserve

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 National Park Service

189 800 14  
 ARO DEC 84



### GEOLOGY

#### BEDROCK

INTRUSIVES (IGNEOUS) - JURASSIC, TRIASSIC AND PERMIAN  
 ULTRAMAFIC ROCKS, CRETACEOUS GRANITIC ROCKS IN  
 EASTERN BROOKS RANGE

#### JURASSIC TO CRETACEOUS (SEDIMENTARY)

ARCTIC FOOTHILLS GRAYWACKE, CHERT  
 DE LONG, BAIRD AND SCHWATKA MOUNTAINS GRAY  
 WACKE, MUDSTONE, CONGLOMERATE, SANDSTONE,  
 SILTSTONE, SHALE  
 KOBUK SELAWIK LOWLANDS GRAYWACKE, MUDSTONE,  
 CONGLOMERATE

#### PERMIAN TO TRIASSIC

ARCTIC FOOTHILLS (SEDIMENTARY) SHALE, CHERT, LIME  
 STONE  
 DE LONG, BAIRD AND SCHWATKA MOUNTAINS IGNEOUS  
 MAFIC VOLCANIC AND INTRUSIVE ROCKS (BASALT,  
 GABBRO)

#### MISSISSIPPIAN AND OLDER (SEDIMENTARY)

ARCTIC FOOTHILLS CONGLOMERATE, SHALE, LIMESTONE  
 DE LONG, BAIRD AND SCHWATKA MOUNTAINS CONGLOMERATE,  
 SHALE, LIMESTONE, DOLOMITE, SANDSTONE, CHERT,  
 PHYLLITE, ALSO SOME METAMORPHIC GNEISS

#### UNCONSOLIDATED DEPOSITS

GLACIAL - MORaine AND DRIFT

EOLIAN - INCLUDES ACTIVE SAND DUNES IN THE EASTERN  
 PART OF THE KOBUK SELAWIK LOWLANDS

FLUVIAL / COASTAL / UNDIFFERENTIATED DEPOSITS  
 ALLUVIAL, FLUVIAL, FLOODPLAIN, TERRACE, AND  
 ALLUVIAL FAN DEPOSITS ASSOCIATED WITH STREAMS  
 AND RIVERS  
 COASTAL - OLDER INTERLAYED ALLUVIAL AND MARINE  
 SEDIMENTS AND MODERN BEACHES, DELTA, BARS  
 AND SPITS

# GEOLOGY & PALEONTOLOGY

Cape Krusenstern  
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Kobuk Valley National Park

Noatak National Preserve

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National Park Service

189 80014  
ARO DEC84

0 10 20M  
0 10 20KM



## PALEONTOLOGY

( FOSSIL COLLECTION SITES )

SITE 1 CONODONTS / RADIOLARIANS  
SITE 2 CONODONTS / RADIOLARIANS  
SITE 3 CONODONTS / RADIOLARIANS  
SITE 4 BRACHIOPODS  
SITE 5 CONODONTS  
SITE 6 STROMATOPOROIDS / CORALS  
SITE 7 CONODONTS  
SITE 8 PLANTS (MESOZOIC)  
SITE 9 CONODONTS  
SITE 10 ECHINODERMS / BRACHIOPODS SPONGE  
SITE 11 CORALS / BRACHIOPODS / CONODONTS  
SITE 12 RADIOLARIANS / PELICYPIDS CONODONTS  
SITE 13 ECHINODERMS / CORALS / BRACHIOPODS

SITE 14 CORALS (MISSISSIPPIAN)  
SITE 15 CORALS (MISSISSIPPIAN)  
SITE 16 CORALS (MISSISSIPPIAN)  
SITE 17 CORALS (MISSISSIPPIAN)  
SITE 18 CORALS STROMATOPOROIDS GASTROPODS  
SITE 19 CORALS STROMATOPOROIDS GASTROPODS  
SITE 20 CORALS STROMATOPOROIDS GASTROPODS

SOURCE - FOR SITES 14-20: 1954 REGIONAL  
GEOLOGIC MAP OF THE SHUNGNAK AND SOUTHERN  
PART OF THE AMBLER RIVER BY W.W. PATTON JR.  
1 P. MILLER AND IRVING TAILLEUR 1968



SITE LOCATIONS



OTHER MAPPED SITES

OTHER UNMAPPED PALEONTOLOGICAL RESOURCES OCCUR  
IN THESE PARKS

SOURCE - FOR SITES 1-13: 1941 GEOLOGY OF THE  
SINAI TANK / AP MOUNTAINS AND MT. OPHOLITE  
ROAD PASS QUAD BY S.I. VITKOVSKY AND  
WILLIAM H. NELSON 1962



## GEOLOGY

### BEDROCK

INTRUSIVES (IGNEOUS) - JURASSIC, TRIASSIC AND PERMIAN  
ULTRAMAFIC ROCKS, CRETACEOUS GRANITIC ROCKS IN  
EASTERN BROOKS RANGE

JURASSIC TO CRETACEOUS (SEDIMENTARY)  
ARCTIC FOOTHILLS GRAYWACKE, CHERT  
DE LONG BAIRD AND SCHWATKA MOUNTAINS GRAY  
WACKE, MUDSTONE, CONGLOMERATE, SANDSTONE,  
SILTSTONE, SHALE  
KOBUK SELAWIK LOWLANDS GRAYWACKE, MUDSTONE,  
CONGLOMERATE

PERMIAN TO TRIASSIC  
ARCTIC FOOTHILLS (SEDIMENTARY) SHALE, CHERT, LIME  
STONE  
DE LONG BAIRD AND SCHWATKA MOUNTAINS (IGNEOUS)  
MAFIC VOLCANIC AND INTRUSIVE ROCKS (BASALT,  
GABBRO)

MISSISSIPPIAN AND OLDER (SEDIMENTARY)  
ARCTIC FOOTHILLS CONGLOMERATE, SHALE, LIMESTONE  
DE LONG BAIRD AND SCHWATKA MOUNTAINS CONGLOMERATE,  
SHALE, LIMESTONE, DOLOMITE, SANDSTONE, CHERT,  
PHYLLITE, ALSO SOME METAMORPHIC (SCHIST,  
GNEISS)

### UNCONSOLIDATED DEPOSITS

GLACIAL - MORaine AND DRIFT

EOLIAN - INCLUDES ACTIVE SAND DUNES IN THE EASTERN  
PART OF THE KOBUK SELAWIK LOWLANDS

FLUVIAL/COASTAL UNDIFFERENTIATED DEPOSITS  
ALLUVIAL (FLUVIAL) FLOODPLAIN, TERRACE AND  
ALLUVIAL FAN DEPOSITS ASSOCIATED WITH STREAMS  
AND RIVERS  
COASTAL - OLDER INTERLAYED ALLUVIAL AND MARINE  
SEDIMENTS AND MODERN BEACHES, DELTAS, BARS  
AND SPITS

SOURCE - ALASKA REGIONAL PROFILES - NORTHWEST  
REGION BY LIDIA L. SELKREGG FOR STATE OF ALASKA  
UNIVERSITY OF ALASKA ARCTIC ENVIRONMENTAL  
INFORMATION AND DATA CENTER ANCHORAGE AK 90  
DATE: 8/83



shale, and limestone from the Devonian to the Mississippian periods.

Glaciofluvial deposits are found over an area between the Noatak River to Kotlik Lagoon and between the Kilikmak and Jade Creek drainages. Within the monument this area was twice affected by glacial advances during the Pleistocene epoch. The first glacial advance occurred during the middle Pleistocene time. (Hopkins, 1977). This event occurred between 0.25 and 1.25 million years ago. The second, and more recent glaciation correlates with the Illinoisian Glaciation of the central United States and occurred between 125,000 and 250,000 years ago. During both periods of glaciation large glaciers extended down the Noatak River drainage and across the lowland area east of the Kotlik Lagoon and deposited the glaciofluvial deposits now found. The monument has not been glaciated for approximately 125,000 years. A unique feature within the monument is a recognizable Illinoisian glacial esker or gravel ridge marking the bed of a sub-glacial stream (Hopkins, 1977). An esker of this age (over 100,000 years old) is considered rare.

The coastal area of the monument on the north of Kotzebue Sound is a beach ridge plain which has received sediments deposited by longshore currents over the last several thousand years. The primary purpose of the Cape Krusenstern National Monument is for the protection and interpretation of this beach ridge complex which contains archeological sites depicting every known cultural period in arctic Alaska over a 6,000 year period.

Moore (1966) postulated that the primary components of Cape Krusenstern sediment (sandstone, chert, limestone) are derived from the bedrock cliffs and bluffs from Cape Thompson south to Kisimilok Mountain. Limestone in the beach ridges is thought to originate from the cliffs flanking Battle Rock; gravel is thought to be derived from alluvium south of Rabbit Creek and north of the Krusenstern Lagoon (Hopkins, 1977).

Fossil mollusks apparent on the beaches of Cape Krusenstern suggest that gravels of the nearby sea bottom have also been a significant contributor to the beach ridges. In addition, a more recent study suggests that the locally northward drift of sediment from Kotzebue Sound and the mouths of the Noatak and Kobuk rivers also play a role in deposition and ridge formation at Cape Krusenstern. In general, it can be assumed that several sources collectively contribute to beach formation at Cape Krusenstern. Today there are 114 discernible ridges which extend as much as 9 miles

from east to west. These beach ridges record the post-glacial (Wisconsin) rise in sea level during warm spells with consequent deposition of sediments over older rock.

Not all of the 114 beach ridges at Cape Krusenstern are complete. At places unconformities appear either where the sea has eaten back into part of a ridge series or where the direction of beach formation has changed. Shifts in beach formation are generally attributed to changes in wind direction. Northwest winds now prevail, and studies of sediments show that the beaches were built largely of gravels that slowly shifted with the persistent currents along the shoreline.

The likelihood of the occurrence of significant amounts of metallic minerals and nonmetallic minerals is considered to be low. The monument occupies a small portion of a broad east-west trending belt across Northwest Alaska within which the potential for the occurrence of oil and gas is rated as moderate (AEIDC, 1975).

#### Implications

- 1.) The monument affords the opportunity for scientific study and interpretation of the 114 recognizable beach ridges and other significant sites which contain prime archeologic resources of national and international importance.
- 2.) The monument contains glacial features of the Illinoisian period which lend themselves to scientific interpretation.

#### Paleontology

Little is known about paleontological resources that exist within the boundaries of the monument. Fossil mollusks and some ivory have been found along the beaches. (See Geological and Paleontological map page 2-17)

#### Oceanography

The climatic, geologic, and biological processes which have influenced the landscape and the human activities occurring at Cape Krusenstern are inseparably tied to the adjacent marine environment.

The Chukchi Sea includes that ocean area along the northwest coast of Alaska, and as far south as the Bering Strait and the westernmost extension of the Seward Peninsula. The Chukchi Sea encompasses a portion of the Arctic Ocean which spans the entire northern coast of Alaska. The monument faces a southeastern

portion of the Chukchi Sea and along its southern boundary faces a portion of the Kotzebue Sound.

A number of shallow lagoons along the monument's coastline are formed by barrier spits and islands. Today these barrier formations and lagoons oftentimes provide important habitat with relatively intense activity for birds, fish, marine mammals, and terrestrial mammals. The most biologically stable and productive lagoons are those with outlets which enable a free fluxing action between marine and fresh waters. The longest lagoon in the monument is Krusenstern Lagoon which is nine miles long. Kotlik Lagoon is next largest at four miles in length.

The circulation of waters off Cape Krusenstern in the southern Chukchi Sea is generally northward through the Bering Strait and into the Arctic Ocean. A vast counterclockwise movement of water occurs within the Chukchi Sea, although wind, bottom contours, and coastline configuration also play an important part in circulation within localized areas (AEIDC, 1975).

Tidal range for the Chukchi Sea is about 11 inches (Resource Analysts, 1983). Wave heights are generally less than six feet, but the greatest wave heights in August have reached 22 feet.

Salinity of waters within the Chukchi Sea are relatively low during the ice-free season because of the high volume of freshwater runoff and ice melt. Waters passing northward through the Bering Strait into the Chukchi Sea are of relatively low salinity due to the effects of the outflow of Yukon River water in the Norton Sound area. This pattern is reversed in winter, as the upper layer freezes and salts are concentrated at lower depths (AEIDC, 1975).

The Chukchi Sea is ice-covered from November until May. Ice formation begins in October with the ice edge from the permanent polar ice pack extending progressively southward until late March. Although the sea ice in the Chukchi Sea is fairly solid, reaching two or more feet in thickness, several leads and breaks occur along the coastline. The northward retreat of the ice edge begins in April and continues until late September.

The relatively warm waters of the Bering Sea flow northward bringing into the Chukchi Sea a continuous supply of plankton, microscopic plant and animal organisms which float and are basic components in food chains. Plankton production in open waters and along ice leads provide important feeding areas for fish, birds, and marine mammals. Plankton production peaks in

July. The Chukchi Sea is considered relatively fertile, although the diversity and abundance of organisms are not as great as in the Bering Sea to the south.

#### Implications

- 1.) High tides in association with storms can cause coastal flooding in the monument and in Kotzebue. Any development in coastal areas should be evaluated for this environmental hazard before construction.
- 2.) The addition of man-made structures in coastal areas or offshore waters could inadvertently affect natural oceanographic forces which could in turn adversely affect the archeological resources at Cape Krusenstern and other coastal areas in the monument.

#### Soils

A variety of factors affect the development of soils in the monument. These include extreme low temperatures, strong winds, and low precipitation. Together they cause the physical processes of weathering to take precedence over chemical factors in soil development. Topography and soil drainage, or the lack of effective drainage as a result of underlying permafrost, are also important factors.

The major soil types associated with the monument include the upland or mountain slope soils and those associated with the lowland areas nearer the coast.

The lower slopes of the western Igichuk Hills and the Mulgrave Hills are covered with poorly drained, gravelly or loamy soils with a surface layer of peat. Depth to permafrost is variable. The upper slopes of these hilly areas possess well-drained gravelly or loamy soils with a deep permafrost table.

Along the coastline of the monument and flanking Krusenstern, Kotlik, and other major lagoons, are marine and alluvial deposits which form beaches spits, and deltas. Soils of lowland areas along the coast are poorly drained with a surface layer of fibrous peat and a shallow permafrost table. The peat layer ranges from 8 to 24 inches in depth.

Soil temperatures at nearby Kotzebue at one foot depth range from a high of 40°F during July and August, to less than 15°F during most of February and March (AEIDC, 1975). Due to the lag time between summer temperature highs near the surface and those at greater depths, the maximum depth of soils at more than 30°F is reached in Kotzebue in December. Soils within the monument are generally considered to be unsuitable for farming.



### Implications

- 1.) Soils at Cape Krusenstern are highly subject to erosion when the overlying vegetation mat is disturbed or removed.
- 2.) Compression and tearing impacts of heavy vehicles on the vegetative mat or overlying snowcover can induce or accelerate erosion.
- 3.) Permafrost at shallow depths in the monument and in Kotzebue present severe limitations for the construction of building foundations and utility lines. The removal of vegetation at the surface can cause a change in the depth of the active layer overlying permafrost with consequent heaving and sagging action at the surface.

### Hydrology

The lands within the monument are drained by a number of streams which flow from the uplands and empty into the Chukchi Sea or coastal lagoons.

During the ice-free season, some of these streams and associated coastal lagoons provide important habitat for anadromous and freshwater fish populations, as well as migrating birds and terrestrial mammals. During the winter, streamflow at the surface ceases as waters freeze. In areas where substantial springs exist, water may continue to flow out at the surface and then freeze into successive thin sheets or layers of ice. The resultant thick ice formation, known as aufeis, may expand well beyond the normal stream channel. Such expansion can cause a shifting or modification in the direction of streamflow or channeling during successive periods of breakup. Both Jade and Rabbit creeks are subject to aufeis formation and have numerous channels and low intervening gravel bars.

Springs within the monument are often associated with limestone deposits which, through absorption and dissolution, can conduct large volumes of groundwater. Streams in the Igichuk Hills run dry where they cross limestone zones (Hopkins, 1977). The best potential sources of groundwater within the monument are from limestone zones such as the one in the upper Jade Creek.

Permafrost plays an important role in the topographic development and appearance of lands within the monument. The lowland areas of the monument are underlain by thick continuous permafrost. Permafrost, or perennially frozen ground, can reach depths of 2,000 feet, but generally reaches a maximum depth of 1,400 feet within the inland portions of the monument. At nearby Kotzebue permafrost depths are generally less than 240 feet because of saltwater intrusion at that depth (City of Kotzebue, 1971).

A variety of permafrost features are evident within the monument, particularly in the lowland areas. These include thaw lakes, ice wedge polygons, pingos, frost mounds and solifluction lobes. Many of these features are caused by localized melting of ground ice resulting in settling or "caving in" of the ground surface. These features are collectively referred to as "thermokarst topography." Thaw lakes are formed by the collection of standing water in a surface depression underlain by permafrost. The collection of water in a pool causes the melting of some permafrost underneath. Because there is no downward percolation through the frozen material, the water expands across a broader surface area forming a shallow lake.

Ice wedge polygons occur when contraction of the ground surface due to extreme temperatures causes cracks which accumulate water and snow. This moisture turns to ice and exerts a "wedging" effect which causes a polygonal patterning at the surface. Pingos are ice-cored hills raised by frost action above the permafrost layer. Frost mounds are essentially small pingos of heights up to four feet, and often occur in drained lake basins. Solifluction lobes often occur as tear-like terrace features on mountainsides or hillsides. They are caused by the saturation of earth material overlying permafrost, resulting in a downslope slumping or solifluction. This feature is common on the steep slopes of the Igichuk Hills to the southeast of the monument.

#### Implications

- 1.) Jade and Rabbit Creeks are known to experience aufeis. These locations and all other streamside areas should be carefully evaluated for this environmental hazard before any developments are constructed, if applicable.
- 2.) The best sources of groundwater for drinking water wells will occur in limestone formations.
- 3.) Permafrost may be encountered in any location within the monument or in Kotzebue; its effects on proposed facilities should be analyzed prior to design.

#### Water Quality

The most recent and thorough water quality studies in the region have been completed as part of the Environmental Baseline Studies for the Red Dog mine proposal by Cominco Ltd. These studies, when interpolated, are thought to be accurate for the monument as a whole even though the New Heart Creek station was the only one inside the monument.



Typically the flowing streams of the monument are like other streams in the region. These clear water streams are unpolluted, exhibit low levels of color, suspended solids, turbidity and nutrients. Water is highly oxygenated, moderately hard to hard and of the calcium bicarbonate type. The pH is essentially neutral and levels of most trace elements fall within the ranges acceptable for freshwater aquatic life (Cominco, 1983 & 1984).

At the Red Dog Mine site outside the monument waters are naturally contaminated with cadmium, lead and zinc. This contamination occurs because the ore in the ground is of sufficient quantity and concentration to alter the water as it passes over the ore deposit. None of these waters flow into the monument.

Most lagoons in the monument are brackish and are presumed to have sluggish circulation during much of the year.

Accumulations of natural occurring spawned out rotting fish may seasonally lower the water quality in some areas.

Some small lakes, and small meandering streams in the monuments lowlands also have sluggish waters which may have locally high accumulations of organic matter.

According to the Bureau of Land Management wells in the region are generally deep and the water from them is of poor quality (1974).

#### Implications

- 1.) Surface waters in the monument are generally unpolluted but seasonally local conditions may change the quality of water.
- 2.) Ground water information for the monument is currently very scarce. Development of wells for public water supplies could be very costly.

#### Vegetation

The majority of the monument is characterized by a moist tundra vegetation community; a strip of wet tundra is located on the southern boundary facing the Kotzebue Sound, while alpine tundra or barren ground is found in isolated upland areas. A community of salt-tolerant plants inhabit the coast. Isolated patches of white spruce trees are found in the southeast portion of the monument. As many as 300 vascular plants, 100 mosses and liverworts, and 81 lichens were found in the tundra community 80 miles north, at Cape Thompson by Albert Johnson in his 1966 analysis of the vegetation.

The moist tundra zone, encompassing virtually all lower slope and lowland areas back from the coastline, is characterized by extensive cottongrass tussocks with mosses and lichens between them, some areas are dominated by dwarf shrubs. Hiking through tussocks is slow, wet, and usually strenuous. Shrubs and other species in the moist tundra include willow, dwarf birch, Labrador tea, Lapland rosebay, mountain alder, mountain avens, and saxifrages. In the wet tundra area along the southern boundary, a mat vegetation is found rather than tussocks. Grasses and sedges are dominant including arrow grass, pendent grass, snow grass, as well as bog rosemary, louseworts, and woodrush.

At higher elevations (generally from 750 to 1,600 feet) on windswept, well-drained, and rocky slopes of the western Igichuk Hills and the Tahinichok Mountains to the north, an alpine tundra community is found. Vegetation is sparse and consists of willow, heather, and mountain avens in combination with grasses, sedges, herbs, and mosses. Lichens and saxifrages are common on drier areas. The alpine tundra is composed of a plant mat which is no more than a few inches high.

Along the coast, wave action and the scouring ice largely restrict plant growth to the lagoon side of the barrier islands and dunes. The succession of rows of ancient beaches at Cape Krusenstern occurring as horizontally stratified ridges are distinguishable by slight vegetational differences between the low ridges and their intervening swales. The vegetation of the coastal lagoons along the coast is abundant due to the high accumulation of nutrients in shallow waters. A variety of freshwater and brackish water plankton are found depending upon salinity, as well as numerous algal forms. Eelgrass is common in marine waters, while pendant grass and mare's tail are more common near freshwater.

The white spruce is an important wood source to the people of this area for the construction of boat frames, sled runners, spear handles, oars, drying racks, tent stakes, and log homes (Uhl, 1980). Spruce is also the most common source of fuel for those with wood stoves. The wood of the balsam poplar is used to a considerably lesser degree than spruce for construction material and fuel.

Local persons of the region have traditionally used berries, roots, and leaves of edible plants in the monument. Salmonberries are picked in great quantities at mid-August when ripe and are eaten as a fruit dessert all winter long. Other berries eaten are blueberries, blackberries and cranberries. The leaves of sourdock

are collected, stored, and eaten or fermented to be used like a brine solution for pickling meats. Sea lovage, wild chives, beach greens and willow leaves are other local greens which are taken. The starchy roots of masu and cottongrass are also eaten (Uhl, 1980).

### Implications

1.) Tundra vegetation is highly subject to disturbances and recovers slowly after disturbance. Disturbance should be kept to a minimum to prevent scarring and to help protect fish and wildlife habitat.

2.) Trees of appreciable size are very limited within the monument. Management of their timber use could be coordinated with surrounding land owners to relieve the pressure on the resource while striving to adequately maintain opportunities for wood use for customary and traditional needs.

### Fish and Wildlife

Wildlife is a major resource of Cape Krusenstern National Monument. ANILCA requires protection of habitat for seals, other marine mammals, birds, fish and other wildlife of the monument. Twenty-one species of terrestrial mammals are assumed to utilize lands within the monument boundaries (NPS, 1974) and twenty-one species of marine mammals utilize the adjacent waters of the Chukchi Sea and Kotzebue Sound. Included among terrestrial mammals are caribou, grizzly bear, musk ox, moose, Dall sheep, wolf, fox, weasel and wolverine. Marine mammals include ringed seal, bearded seal, Stellar sea lion, walrus, bowhead whale, finback whale, beluga whale, and harbor porpoise.

Caribou found within the monument are part of the Western Arctic Herd which ranges over the entire Northwest Alaska region. The herd declined from a population of at least 242,000 individuals in 1970 to an estimated 75,000 individuals in 1976. Since that time the herd has increased in size and was estimated to be 171,699 individuals in 1982 (ADF&G 1984). The 1984 herd size is projected to be approximately 200,000 (J. David, pers. comm. 1984).

In modern times caribou were first reported moving in the area encompassed by the monument in 1949 (Uhl, 1980). Successive migrations in the early 1960s included up to 10,000 caribou moving through the Cape Krusenstern area. During recent years, as many as 60,000 caribou have been recorded moving through the monument with as many as 10,000 wintering along the Kivalina drainage and within the Mulgrave Hills (Resource Analysts, 1983). A maximum of 2,500 animals were reported wintering in the Wulik and Kivalina

drainages in 1982. This "stop over" activity on the southward migration route appears to be related to the abundance of food and the availability of escape routes during predation (Uhl, 1980).

During the post-calving period, animals aggregate for the spring migration northward toward the Arctic Coastal Plain. Between 20,000 and 30,000 animals moved south and east across the Wulik River during early July in recent years, although the majority of the herd moves farther north.

In general, it can be said that movement of a portion of the Western Arctic Herd in the area of the monument is highly variable from year to year. While herd size may, in part, be responsible for regional herd movements, a variety of more localized factors are also important. These may include wolf concentrations, hunting activity, and behavior of leading caribou. (See Caribou and Musk Ox Map page 2-29)

Moose within the region are most abundant in areas of transitional vegetation which include mixed willow and spruce forest. These areas are limited within the monument boundaries, although moose numbers regionally have increased in recent years. Uhl (1980) reports that moose were generally unknown to occur within the area now encompassed by the monument until a young bull was taken in 1947. The moose population increased and expanded its range during the 1950s and 1960s, particularly in the nearby timbered areas of the lower Noatak. Approximately 1,500 moose were estimated to inhabit the Noatak drainages in 1980 (ADF&G, 1980). Moose also moved into less timbered areas, (including willow patches) within the monument. It is likely that no more than 50 moose inhabited the monument at one time (Uhl, 1980), with a summer influx possibly related to the cooler temperatures and breezes near the coast reducing irritating insects. Today, moose densities appear to be high within the region.

While moose have been used as a source of meat by subsistence hunters near the monument during years when caribou were scarce, caribou are preferred by local residents. The moose population appears to be highly variable because of its relationship to wolf numbers, caribou numbers, and icing conditions on major drainages. No major shifts in population composition were noted in the region in 1983, except for a somewhat reduced late winter calf percentage which dropped from 22% in 1982 to 14% in 1983 (ADF&G, 1983). (See Dall Sheep and Moose Map page 2-31)



# CARIBOU & MUSK OX

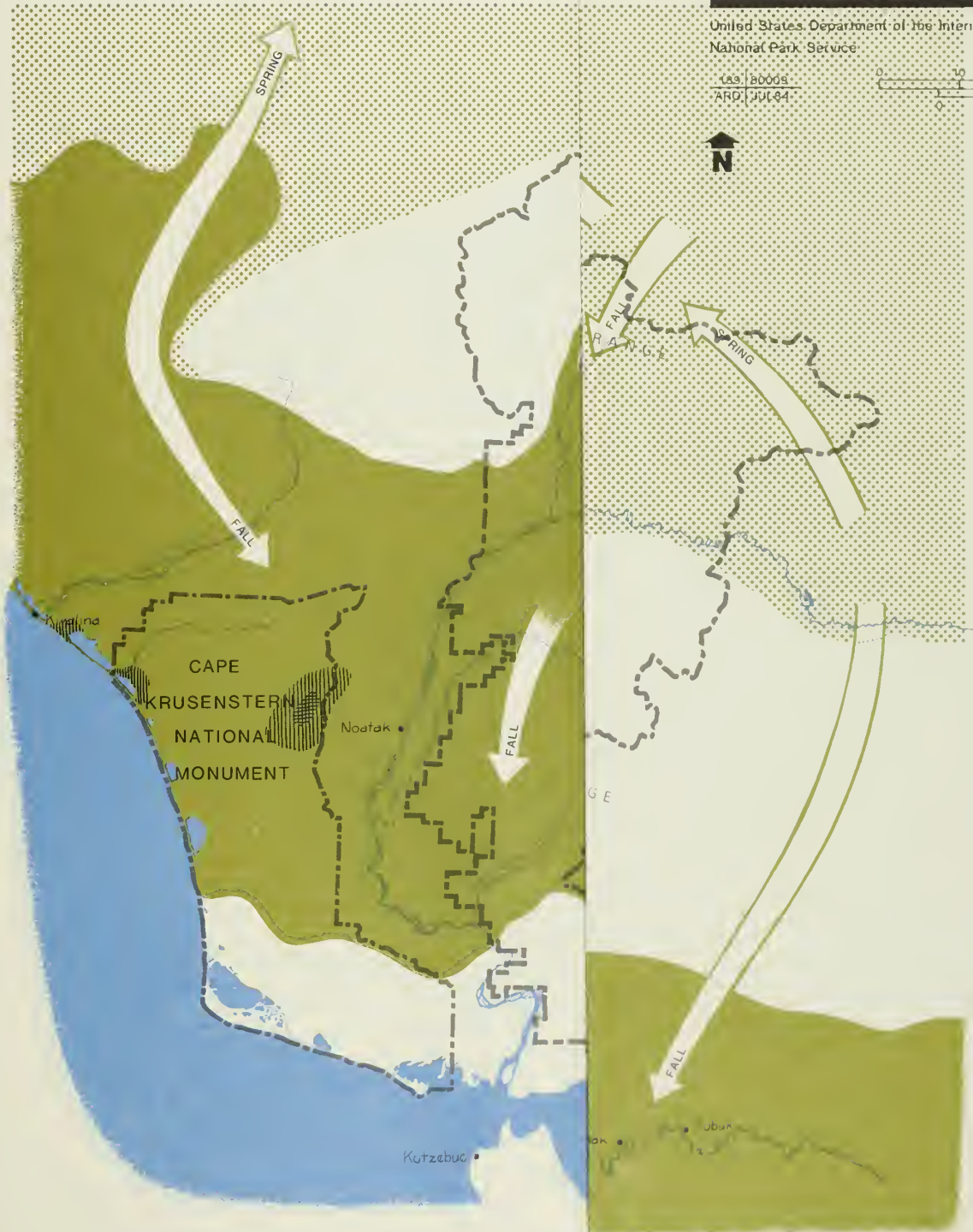
Cape Krusenstern  
National Monument

Kobuk Valley National Park

Noatak National Preserve

United States Department of the Interior  
National Park Service

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CARIBOU  
& MUSK OX

Cape Krusenstern  
National Monument  
Kobuk Valley National Park  
Noatak National Preserve

United States Department of the Interior  
National Park Service

Map 80009  
ARPD 10/64



CARIBOU



SUMMER



WINTER



MIGRATION ROUTES

MUSK OX



SUMMER



WINTER

SOURCE: ALASKA'S WILDLIFE & HABITAT, ADF&G 1973



# DALL SHEEP & MOOSE

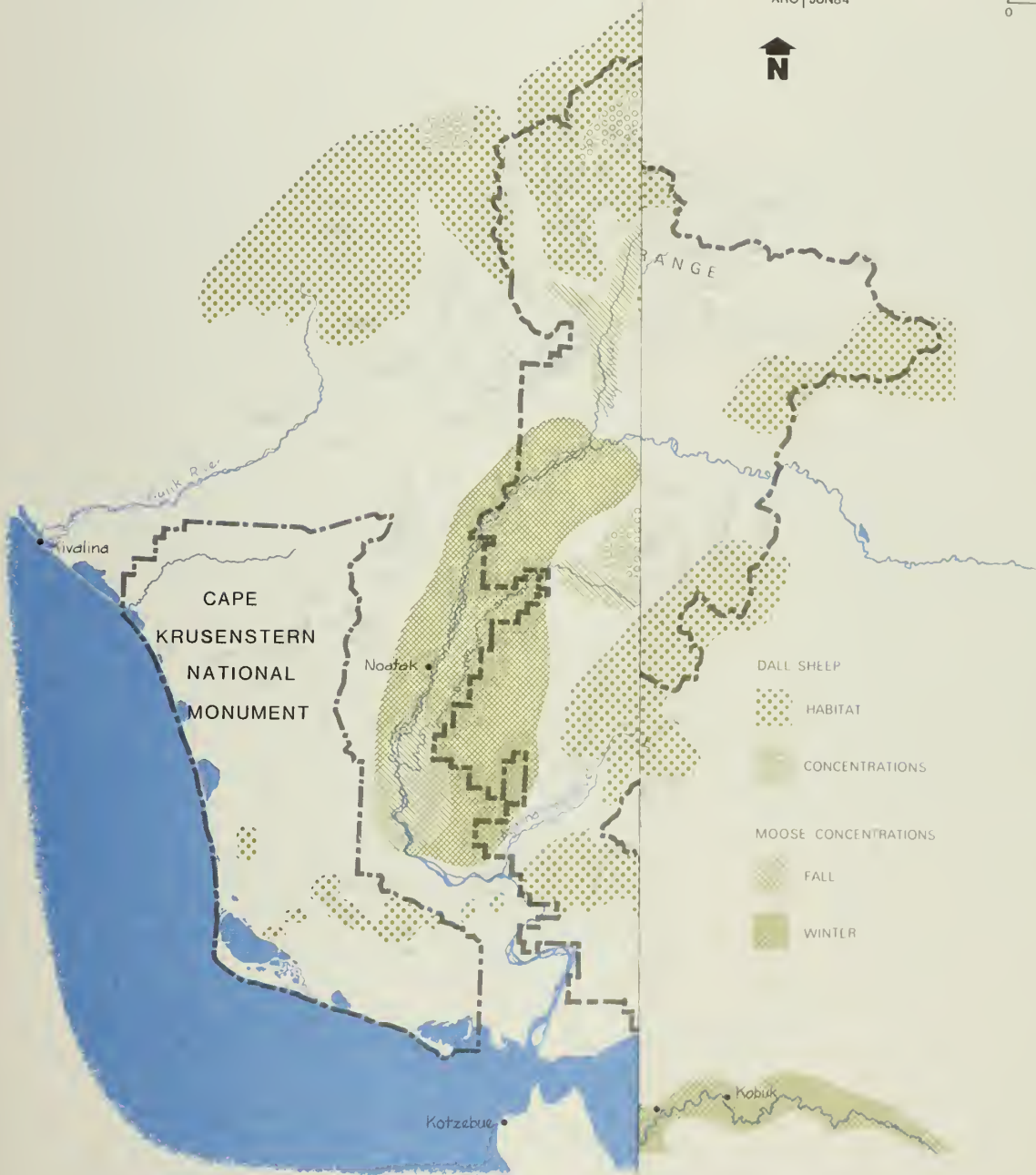
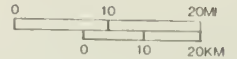
Cape Krusenstern  
National Monument

Kobuk Valley National Park

Noatak National Preserve

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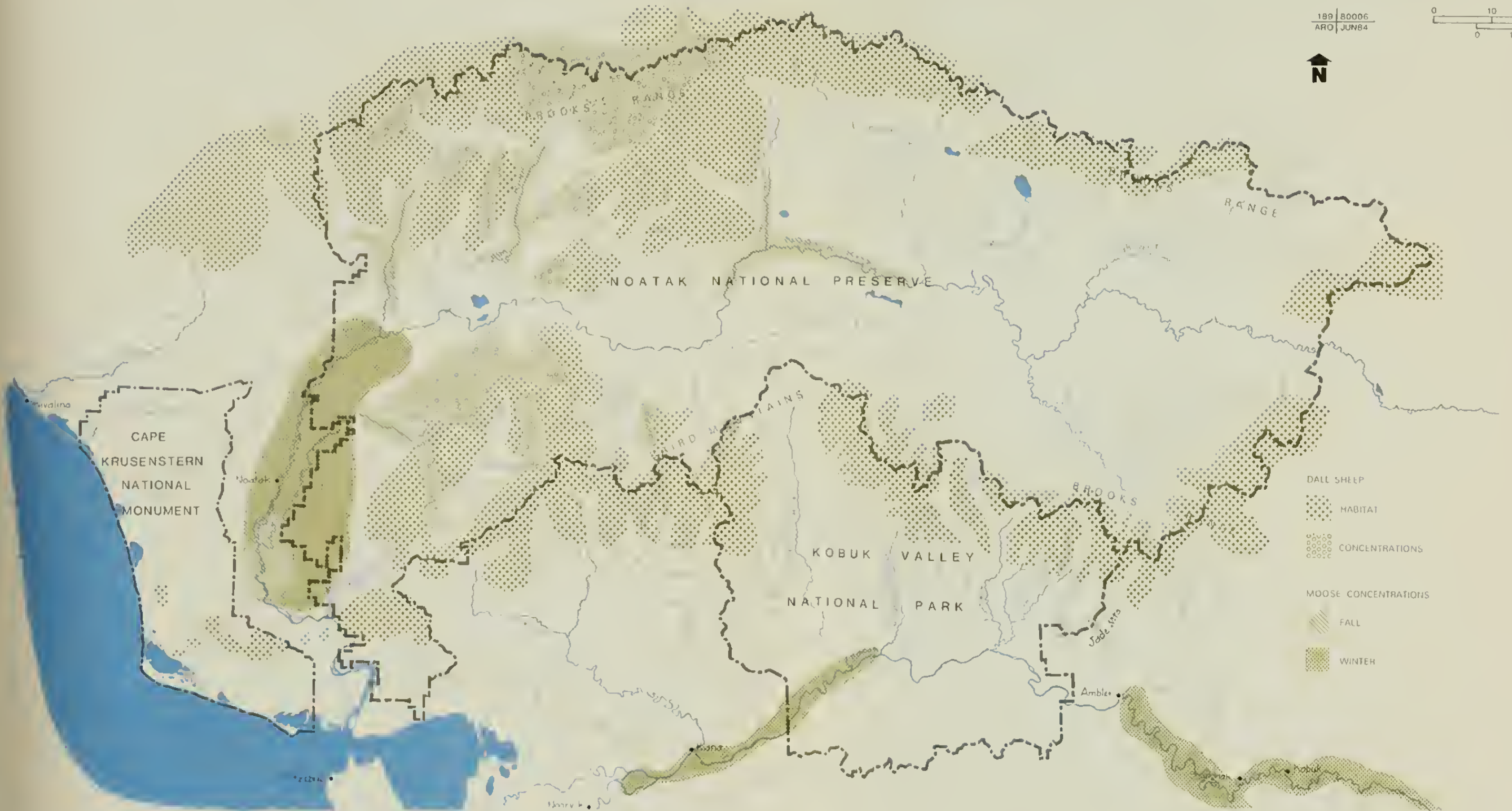
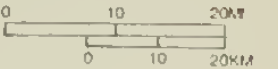
SOURCES: ALASKA'S WILDLIFE & HABITAT  
ADF&G 1973 ADDITIONAL DALL SHEEP  
RANGE DATA: F. SINGER NPS 1983

# DALL SHEEP & MOOSE

Cape Krusenstern  
National Monument  
Kobuk Valley National Park  
Noatak National Preserve

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SOURCES: ALASKA'S WILDLIFE & HABITAT  
ADFG 1973 ADDITIONAL DALL SHEEP  
RANGE DATA: F. SINGER NPS 1983

Comprehensive information regarding the abundance, distribution, food habits, and reproductive biology of the grizzly bear does not exist for the region or monument. Population estimates for an area encompassing the Kivalina, Noatak, Kobuk, Selawik, and Buckland drainages range between 700 and 2,400 (Darbyshire and Science Applications, 1983).

Grizzly bears, while not plentiful within the monument, are common visitors along stream courses and the shoreline near more mountainous terrain. Uhl (1980) estimates that fewer than 10 bears inhabited the monument at any one time. Greater densities are known outside the monument in the Noatak drainage.

Grizzly bears have an omnivorous diet. They usually forage along streams, wet meadows, and tundra slopes during the summer months for grasses, shrubs, and riparian vegetation. Salmon, ground squirrels, carrion (including marine mammals washed ashore), and berries are often eaten in the fall. Denning is undertaken in mid-October and lasts until April or May depending upon the severity of the winter. Den sites are excavated in river banks or well-drained mountain slopes prone to snowdrift. Breeding occurs from May until July. Two cubs are generally born in the den in December. The interval between breeding and weaning is usually four years.

Black bears are known to inhabit the forested Kobuk drainage, but there are no recorded sightings from the tundra and forested areas within the monument. (See Arctic Fox and Black Bear Map page 2-35)

Musk ox are present in the region in small numbers. The musk ox is a hoofed, horned mammal with a long coat of brown hair. The last naturally occurring musk ox died in Alaska in 1865, but musk ox were re-introduced to the state from Greenland in 1936. Grasses, sedges, wood rushes, and dwarf birch are their primary food sources.

The release of 36 musk ox near Cape Thompson (60 miles northwest of the monument) in 1970, and a second release of 30 animals in the same area in 1977, has resulted in the dispersion of musk ox into the monument in recent years. An area in the Mulgrave Hills 8 to 10 miles west of the village of Noatak was identified by the Alaska Department of Fish and Game as summer and winter musk ox range. Approximately 80 animals are currently considered to inhabit the area outlying Cape Thompson (Resource Analyst, 1983). The U.S. Fish and Wildlife Service observed 67 muskox, in July of 1980, 20 miles northeast of Point Hope, while an additional group was present in the Mulgrave Hills between the Noatak and



Wulik river drainages in the monument. (See Caribou and Musk Ox Map page 2-29)

Wolves inhabit the major drainages within the monument. Food sources for wolves include caribou, hare, mice, and salmon, depending upon availability. An increase in the availability of caribou as prey in recent years is assumed to have caused a corresponding increase in the wolf population in the region. Wolf densities for the Wulik and Kivalina drainages during spring 1982 were approximately one wolf per 76 square miles. The estimate for the nearby Noatak drainage was one wolf per 325 square miles. The average for the region was one wolf per 90 square miles (ADF&G, Quimby, 1982).

Dall sheep are present through the Baird, and DeLong mountains west to the Wulik Peaks; the area is the northwestern most limit of their range. The Dall sheep feeds upon grasses, forbs, lichens, and willow. The sheep remain near rugged and rocky areas which provide escape routes from wolves, bears, and other predators.

Dall sheep move in and out of the monument's western Igichuk Hills in sparse numbers. Recent survey of these animals by the National Park Service revealed a count of 14 animals which live in these hills crossing from the Noatak drainage periodically. Although Alaska Department of Fish and Game surveys indicate that sheep populations are on the increase (1976-1981) their density is substantially lower than other areas in the state. Formerly prized by subsistence hunters for their fine skins which make excellent parkas and inner clothing, the Dall sheep have become of lesser importance in recent years with the greater use of down and synthetic garments (Uhl, 1980). (See Dall Sheep and Moose Map page 2-31)

Red fox, arctic fox, snowshoe hare, and arctic hare are present within the monument. Expansive grassy areas and a high population of voles and ground squirrels make the monument a highly suitable area for red fox. Their current population is high and stable despite substantial subsistence harvest. The arctic fox generally prefers coastal and delta areas mostly within the Arctic Slope area, but is wide-ranging in its feeding activities. While dens are found within the monument, the arctic fox spends much of its life searching on the ocean ice for carrion. Snowshoe hares are found in the western Igichuk Hills in timbered areas, and within large patches of willow near the coast. These hares are dependent upon willow growth for food and are subject to starvation in areas of sparse willow growth during heavy snow years. The arctic hare, with its characteristic long legs and ears, inhabits the

# ARCTIC FOX & BLACK BEAR

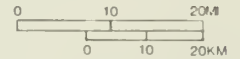
Cape Krusenstern  
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SOURCE ALASKA WILDLIFE & HABITAT  
ADF&G 1973

BROWN BEAR ARE FOUND THROUGHOUT  
REGION

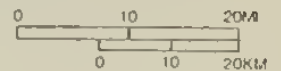


# ARCTIC FOX & BLACK BEAR

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ARCTIC FOX RANGE  
BLACK BEAR RANGE



SOURCE: ALASKA'S WILDLIFE & HABITAT,  
ADF&G 1973

BROWN BEAR ARE FOUND THROUGHOUT  
REGION



monument east of Krusenstern Lagoon and in other areas where willow, alder, and spruce are located.

Wolverine within the monument are light colored with nearly black legs. The wolverine is prized by subsistence hunters for its fine fur used for parka ruffs although the population is very limited within the monument.

Porcupines are numerous in the monument and feed on the bark of willow and spruce. Usually restricted to the timber zones, porcupines are sometimes seen along the beach areas in mid-summer. Weasel, mink, lynx, river otter, and muskrat are also found within the boundaries of the monument.

Marine mammals which inhabit the estuarine and ocean waters in and abutting the monument are very important local resources. The ringed seal (Natchiq), the smallest of the northern seals average 150 pounds in weight and is an important human life-sustaining species in the region. Distinguishable by the yellowish rings or splotches on its dark coat, the ringed seal provides skin, meat, and oil to subsistence users who have traditionally hunted this species off Cape Krusenstern. In fact, Cape Krusenstern itself, is known traditionally by subsistence hunters as "Sealing Point." The greatest densities of ringed seal off Cape Krusenstern are found in June.

Bearded seals (Ugruk), the largest of the western arctic seals, weigh up to 800 pounds, they appear in June in the waters adjacent to the monument. Despite its short seasonal presence, the light grey bearded seal is a highly important subsistence resource. This seal is widely distributed in the Chukchi and Bering seas where it feeds on shrimp, bottomfish, clams, and worms.

Spotted seals (Qusigiaq) and ribbon seals (Quigutlik) are also found off Cape Krusenstern. The spotted seal is of medium size, up to 300 pounds, and feeds on herring, salmon, and whitefish occurring along the coast of Chukchi Sea. The animals concentrate generally along the southern extent of the ice pack. The ribbon seal, with its distinctive white bands against a black body, is found in greatest abundance south and east of the Seward Peninsula in the central Bering Sea.

Beluga whales are small whales about 16 feet in length and occur throughout the Chukchi and Bering seas. These white whales travel in groups and are prized by subsistence hunters for their edible skin, blubber, and meat. A few beluga are taken from year to year along the monument's coastline when they appear in open leads



# FISHES

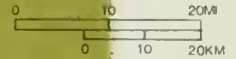
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ARO JUL 84



SOURCE ALASKA'S FISHERIES ATLAS,  
VOLUME I ADF&G 1978

THE RANGE OF FISH ON THIS MAP CONFORMS  
TO THE FISH "PRESENT" CATEGORY ON THE  
SOURCE LISTED ABOVE. THE "OCCASIONAL"  
CATEGORY IS NOT SHOWN ON THIS MAP.

GRAYLING & WHITEFISH PRESENT  
THROUGHOUT REGION

# FISHES

Cape Krusenstern  
National Monument

Kobuk Valley National Park

Noatak National Preserve

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ARO JUL 84

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ARCTIC CHAR/DOLLY VARDEN

NORTHERN PIKE

SHEEFISH/BURBOT

SOURCE ALASKA'S FISHERIES ATLAS  
VOLUME I ADF&G, 1978

THE RANGE OF FISH ON THIS MAP CONFORMS  
TO THE FISH "PRESENT" CATEGORY ON THE  
SOURCE LISTED ABOVE. THE "OCCASIONAL"  
CATEGORY IS NOT SHOWN ON THIS MAP.

GRAYLING & WHITEFISH PRESENT  
THROUGHOUT REGION

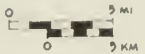


# SALMON

## Cape Krusenstern National Monument

United States Department of the Interior  
National Park Service

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- SOCKEYE
- PINK
- CHUM
- { SPAWNING AREAS

SOURCES: ALASKA FISHERIES ATLAS,  
VOLUME I, ADF&G, 1978

ALASKA COASTAL ZONE MANAGEMENT  
PROGRAM, 1984







Most birds at the monument are summer nesters or migrants. Moist tundra lowlands and wet sedge meadows near the coast are especially important habitat areas. A total of 120 bird species were recorded at nearby Cape Thompson in 1966, of which 65 species are known to nest there. At Cape Krusenstern species include mallard duck, green-winged teal, shoveler, old squaw, greater scaup, common eider, black scoter, red-breasted merganser, Canada goose, snow goose, American widgeon, American pintail, horned and red necked grebes and the common, yellow-billed and arctic loons. The two largest fowl within the monument are the whistling swan and the sandhill crane. Both migrate south in the fall, although the swans are late migrants and usually are in the monument until October (Uhl, 1980). Seabirds in the monument include the long-tailed jaeger, common murre, arctic tern, and glaucous gull. Birds found inland include the willow and rock ptarmigan, goshawk, and snowy owl.

While the importance of the monument to migrating birds in the spring probably varies with snow and ice conditions, the lagoons between Cape Krusenstern and Sheshalik are heavily used by migrating waterbirds when conditions permit. This area is also an important hunting area for subsistence hunters of waterfowl and for egg gathers. It is an important fall staging area for thousands of geese, ducks, shorebirds, and gulls (USFWS, 1984). (See Seabirds and Waterfowl Map page 2-45)

#### Implications

- 1.) Fish and wildlife are a major resource in the monument, any actions which could affect them should be carefully analyzed for their impact upon the populations and upon subsistence opportunities (ANILCA Section 810).
- 2.) Some wildlife species, particularly the grizzly bear can pose a threat to monument visitors.
- 3.) Some species migrate to or through the monument. Careful consideration should be given to actions which would affect migrating species.

#### Threatened and Endangered Species

Cominco Ltd. reports that peregrine falcons were found in the Wulik and Kivalina drainages north of the monument. Additional survey work in 1983 failed to rediscover these nesting birds.

Arctic peregrine falcons have also been reported to nest within the southern half of the monument. The total extent of nesting is unclear, and the area is not considered to be one of the more important peregrine nesting areas (USF&WS, 1984). No other threatened or

endangered species are known to occur within the monument (see Appendix D for additional information).

Implications Information on threatened and endangered species within the monument, especially the peregrine falcon, is neither up to date or comprehensive for all of the monument.

### Scenic Character

Cape Krusenstern National Monument is a broad relatively flat coastal plain with foothills rising eastward to the monument's boundary. The foothills, are composed of two series of hills, the Mulgrave Hills in the north and the Igichuk Hills in the south. Both are predominately composed of limestone which has eroded to produce hills that present soft flowing forms. Numerous small drainages drop from the hills across the east-west breadth of the monument. As they wind to the coastal plain, they create large boggy lowlands, sometimes interlaced with slowly meandering waterways or large coastal lagoons only thinly separated from the Chukchi Sea. The coast itself is flat, windswept and always in a state of change. During the summer months some areas of the coastal tundra come alive with brightly blooming flowers visible only from a short distance. The flatness of the coastal plain also brings the sky into prominent view.

Lastly, most visitors will notice the lack of man-made objects. Although some cabins and buildings do exist, they are mostly on private lands, and are typically small one-story weathered structures which impose little upon the natural scene. Overall the visitor is likely to realize that this landscape, although regularly used by man, is dominated by natural forces.

Implications The scenic character of the monument is dominated by natural features; any National Park Service structures should be designed to blend into the natural environment.

## SOCIOECONOMIC CHARACTERISTICS

### POPULATION

Northwest Alaska, an area of approximately 38,000 square miles, has 11 communities with a total 1980 population of 4,048. Of these residents, 85% are Native, primarily Inupiaq, and 14% are Caucasian.

Kotzebue with a 1983 population of 2,981 represents about 40% of the region's residents. It has a larger Caucasian population than the outlying villages, (23%).

# SEABIRDS & WATERFOWL

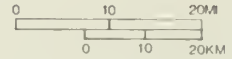
Cape Krusenstern  
National Monument

Kobuk Valley National Park

Noatak National Preserve

United States Department of the Interior  
National Park Service

189 80007  
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SOURCE ALASKA'S WILDLIFE & HABITAT  
ADFAC 1973



SEABIRDS  
& WATERFOWL

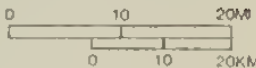
Cape Krusenstern  
National Monument

Kobuk Valley National Park

Noatak National Preserve

United States Department of the Interior  
National Park Service

189 80007  
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- WATERFOWL HABITAT
- MIGRATION ROUTES
- WATERFOWL NESTING SITES
- SEABIRD COLONIES



In 1910 less than 50% of the population lived in villages, but by 1920 the numbers increased to 75% and by 1950 the percentage reached 96% (Darbyshire & Associates, 1983). Today aggregation into villages is occurring again, nonetheless, mobility within the region is still characteristic.

Three major factors have influenced the changes in lifestyles in the region: availability of health care, economic opportunity, and cultural persistence. These factors may cause people to move between the villages or to leave the region. A 200% increase in the population of Kotzebue from 1950-60 is attributed largely to in-migration from outlying villages.

The overall trend in the regional population is growth, although this growth has been occurring at a decreasing rate. Two sources Darbyshire & Associates, 1982 and Dames & Moore, 1983 forecast that the regional population will continue to grow, increasing by thirty to thirty-four percent between the years 1980 and 1990, or at an average annual rate of about three percent. The growth rate for Kotzebue is expected to be even greater than that of the region.

Implications. The projected growth rate for the region will help keep subsistence activity levels up even if when other factors might reduce individual use.

## REGIONAL ECONOMY

Northwest Alaska is characterized by a mixed subsistence and cash economy which is typified by a large percentage of government spending, seasonal variations in economic activity and the prominence of Kotzebue as a economic center.

Subsistence is defined in the NANA Region Coastal Management Plan (Darbyshire, 1982) as "those activities providing food, fiber and shelter requirements of living and maintaining a household whose end products do not involve the exchange of cash." Preservation of a subsistence lifestyle is a primary goal of the people of Northwest Alaska (Dames & Moores, 1983).

While participation in the cash economy has substantially increased over the last decade, and is expected to continue to increase in the future, this does not mean that subsistence efforts will necessarily decline. A 1979 survey of 311 Native households in the region revealed that subsistence is still an important part of the local economy (Dames & Moores, 1983). When the residents were asked how much of their food they

obtain from subsistence the responses were "most" 35%, "one half" 24%, "some" 35% and "none" 6%.

The survey also showed that as income increased, no less time was spent on subsistence activities.

Thirteen sectors make up the region's cash economy. These include renewable resource harvest, mining and exploration, construction, household manufacturing, transportation, warehousing and distribution, communications and private utilities, trade and private services, finance, real estate, quasi-public and non-profit organizations, local and regional governments, state agencies and services and federal agencies and services (Darbyshire and Associates 1982).

Local and regional governments are the largest dollar contributors to the economic base of the entire region and of Kotzebue. Transfer payments (payments directly to households for public assistance, GI bill benefits, pensions, etc.) and income brought home by persons working outside the region are together the largest contributors to the economic base of the outlying villages.

Ninety percent of the region's income is directly or indirectly generated as a result of government spending, with over 40% derived from federal expenditures. Sixty percent of all personal income is earned through the government sector and 21.6% is specifically from transfer payments (Dames & Moore, 1983). State and local governments are the largest employers, employing one-half the region's workers; the federal government employs another 13-20%.

The most important private sector economic activities are construction, fishing, transportation and communication. The construction industry is the second largest contributor to the regional economic base and the greatest source of jobs for residents of outlying villages.

Income and employment rates for Northwest Alaska are well below that of the state, and income levels of the outlying villages are lower than those of Kotzebue. In 1980 the average per capita income for the region was \$7225; where statewide it was \$12,633. The average annual unemployment rate for the region (Kobuk Division) in 1981 was 10.5% (U.S. Department of Labor, 1982) compared to a state rate of 9.4% (Dames & Moore, 1983).

A notable characteristic of employment in the region is its seasonality. A 1978 survey (Darbyshire & Associates, 1982) showed that 54% of the region's

adults had been employed in the past twelve months and of these 44% had worked less than 6 months. Some of the residents wish to work wage jobs only part of the year so they can participate in subsistence activities during the appropriate seasons. The highest rates occur in the late spring, and the lowest are in September, when construction and school related jobs are available.

Kotzebue is the center of demand for services, trade and transport in the region. Sixty four percent of the region's employment opportunities are found in Kotzebue even though it contains only 40% of the population. One-third of this Kotzebue-based employment and income is directly attributable to the provision of services for the outlying villages.

The overall net growth in employment is expected to be very small over the next 10 years, yet population increases will be comparatively large. Although the average regional income increased through the 1970's, two recent studies predict a leveling of the economy at 1980 figures (Darbyshire & Associates, 1982 and Dames & Moore, 1983). These projections include estimated employment at the Red Dog mining development.

#### Implications

- 1.) Although cash incomes may increase local residents are not expected to lessen their dependence upon subsistence resources, within the time frame of this plan.
- 2.) If cash incomes do increase many local hunters may utilize the income to purchase more efficient and sophisticated hunting, fish and trapping gear and equipment.
- 3.) If job requirements and work schedules change, like the use of two weeks on two weeks off schedules, hunting, fishing and trapping may occur during successively shortened time periods.

#### ACCESS

Access to the Monument Access to the monument most typically occurs via snowmachine and occasionally via airplane or dogsled. In the summer months people use small shallow draft boats and skiffs. Typically users come from Kotzebue, Noatak or Kivalina to hunt, fish, trap, commercial fish, harvest wood, to reach their private land, to travel from one village to another, or to recreate. No roads exist within the monument or anywhere nearby.

A heavily used winter trail exists between the communities of Kotzebue and Kivalina along the coastline of the monument. This trail is annually marked through

the use of funds from the State's Department of Transportation and Public Facilities. It has been maintained since the 1920's and could be a right of way under federal Revised Statute 2477. No determination of the trail's legal status has yet been made.

From the village of Kivalina eastward toward the monument (approximately nine miles) an Alaska Native Claims Settlement Act (ANCSA) 17b easement, 25 feet wide, allows for access across Native corporation lands to the monument. Running southeast from Kivalina another winter trail with a 25 feet wide easement, provides access to the northern most coastline of the monument, this also connects with the Kotzebue-Kivalina winter trail.

From the village of Noatak two 17b easements provide access to BLM lands abutting the monument. The northernmost easement is for an existing 25 foot trail limited to winter use only. The other easement, which runs due west from Noatak and is also 25 feet wide is for a proposed access trail. No seasonal limitations are recommended by the BLM for this proposed trail.

Uses allowed by the federal Bureau of Land Management which administers all 17b easements, for the above described 25 foot wide easements include: travel by foot, dogsled, and small all terrain vehicles (ATV'S) less than 3,000 pounds gross vehicle weight.

Fixed wing aircraft access with one exception is unrestricted in the monument. That being the limitation on the local subsistence user who cannot land aircraft within the monument if undertaking subsistence hunting or fishing. This restriction does not apply to private lands, nor does it apply if the user is not engaging in subsistence hunting or fishing. Helicopter landings are not permitted in the monument unless authorized by written permit from the superintendent.

Circulation in the Monument Non-motorized travel within the monument is unrestricted. Snowmachines can be used anywhere in the monument provided adequate snowcover exists. ATV's can be used along the Kotzebue-Kivalina winter trail because it lies on the beach below the high tide line, (owned by the State of Alaska) but not in any other part of the monument.

To Private Lands Within the Monument ANILCA guarantees private property owners reasonable access to their lands. Typically private owners will reach their lands either by snowmachine, ATV or by boat. The vast majority of small private parcel owners use the Kotzebue to Kivalina trail for access because their land is



adjacent to the trail. Access by boat in coastal waters is governed by the State of Alaska and no restrictions are known to exist at this time. The use of inland waterways is presently unrestricted.

#### Implications

- 1.) Several types of access are allowed by law within the boundaries of the monument.
- 2.) Some access is, or could in the future, be managed by the State of Alaska.

#### Pre-ANILCA Use and Activities

ANILCA provides for the continuance of certain activities that occurred in the monument before the passage of the legislation. These include commercial fishing, navigational markers, and valid mining claims.

#### Commercial Fishing

Commercial fishing dates back to 1914 in the Kotzebue area. From 1914-1918 the Midnight Sun Packing Company processed 10,130 cases and 300 barrels of hard salt salmon in the vicinity of Kotzebue. Today's fishery dates back to July 1962 when the effort was again renewed.

A consideration of the 96th Congress when they created the monument was continuation of commercial fishing that occurs along the sea coast of the Kotzebue area. ANILCA section 205 specifically allows this use but does not allow a significant expansion of monument use beyond 1979 levels. Although the fishery occurs outside of the monument's boundary onshore activities like camping, waiting out storms and setting up small base camps do occur within the monument. In reality, most of this activity occurs on what will become private land as the Bureau of Land Management conveys ownership of Native allotments to private individuals.

#### Navigational Markers

One navigational aid marker which consists of a day board and beacon is located at the western tip of Cape Krusenstern on VABM 13. The U.S. Coast Guard recently requested and received a permit to maintain the marker. ANILCA section 1310 allows for maintenance, access to and reasonable expansion of such facilities.

#### Mining Claims

Although some mining claims were filed within the present monument boundaries none of these claims remain in effect today.



## Abandoned Military Site

One abandoned (surplused) military site exists within the boundaries of the monument. In the Igichuk hills an old landing strip approximately 3,000 feet in length with a surface of mineral soil remains, about 1,500 feet is in usable condition. A dirt trail/road originates at the airstrip and winds to the top of a nearby hill and terminates. A less well defined and somewhat overgrown trail also originates at the site and provides foot access to the coast. At the site and in the vicinity, several hundred 55 gallon drums are strewn about the ground, some a mile or more away.

Implications Allowances for activities mandated by ANILCA must be recognized in long term planning and in the daily management of the monument.

## Current Recreation Use and Trends

Although both local residents and visitors to the region recreate in the monument it is often hard to accurately distinguish when local residents are recreating or subsisting. In reality the two are intermixed in a fashion unique to the Inuipaq culture. It is safe to say that as local people carry out subsistence activities, socializing activities and recreation do occur, but to measure the amount of one compared to the other is difficult.

Currently the best estimate of visitation from outside the region by recreationists is fifty persons per year (NPS, Shaver, 1984). These visitors typically come to Kotzebue knowing about the special archeological features of the monument and arrange air transportation to and from the monument. Camping, hiking, and photography are typical associated activities. No definitive map of this use can be made at this time due to low use levels and lack of historic data.

Because only sparse statistical information currently exists for use levels within the monument, the process of predicting future trends which will help the National Park Service plan for the future has involved the blending of information gathered through interviews, public meetings, and from impressions of park staff, planning team members and contributors to the plan. Use by local residents at Sheshalik Spit is increasing. Although this use is on private land, it is within the boundaries of the monument and can have a spill over effect on adjacent public lands. In the winter two people are known to reside in the monument while in summer up to three hundred stay for several months. Summer use at Sheshalik spit has grown substantially in

the past few years and may continue to do so. However, this growth is limited by the number of Native allotments and by the land use policies of the NANA, the major landholder in the area.

Use by visitors from outside the region is expected to grow very slowly, if at all during the life of this plan. With no more than 50-100 out-of-region recreational uses expected in the monument annually.

#### Commercial Visitor Services

Overall, the number of user days in the monument has been very low. In 1982 one commercial company reported six user days for a photography trip. In 1983 ten companies held commercial use licenses but only one actually took clients to the monument. That involved a total of eight user days spent fishing and picture taking. In 1984 the number of operators dropped to seven. Statistics for the 1984 season will not be available until late spring 1985.

#### Implications

- 1.) The current lack of information on recreation use by local residents makes day to day application of statutes and regulations difficult for the monument staff.
- 2.) The current lack of reliable scientific/statistical information on recreation uses and trends makes planning for these activities difficult.

#### Subsistence Uses, Activities and Trends

Modern users of the monument are predominately Inupiaq people who reside in the villages of Kivalina, Noatak, Kotzebue, and Sheshalik, a small settlement developing on Native owned lands at Sheshalik Spit all of which lie within resident zones defined by 36 CFR 13.62. In conjunction with the shift in settlement patterns during the last century there have also occurred alterations in subsistence technology and practices. Muscle power has, in part, been replaced or supplemented by machine power. The modern snowmachine has all but replaced the dog team as the primary mode of winter surface travel. Boats constructed of wood, metal or fiberglass and powered by large outboard motors have virtually made the paddle propelled skin boat a thing of the past. Three-wheel ATV's carry local residents along the ocean beaches where only summer foot travel once occurred. These and other items such as CB radios, chain saws, and gasoline powered ice augers are seen as positive advances by users who now participate in subsistence activities in a modern technological world.

Subsistence activities continue to provide a substantial part of the economic makeup of the region. Protein gained through hunting and fishing activities is, in varying degrees, a major contributor to the local diet. Without this source of food many families would find it difficult if not impossible to purchase the supplies necessary to live in the local area. Within the monument a limited amount of trapping provides residents with furs which can either be used for personal clothing or converted into cash for the purchase of necessary subsistence tools. Berries, roots, and other edible vegetation help to round out the diet. Wood taken from the beaches and from the limited stands of spruce in the monument provide fuel for heating homes during the long cold winters.

Subsistence serves not only as an economic support but also as a cultural and social focus of the local residents. Land and resource use is directly tied to cultural history, spiritual beliefs, sharing patterns, status, territoriality, and value systems. The participation in, even if peripheral, and identification with subsistence pursuits is a unifying force in the local culture. Without subsistence, the relevance of many customs and traditions would be diminished, and ultimately would be lost. This in turn would diminish the viability of the culture as a whole.

The monument is only a part of a much broader area utilized by residents for subsistence activities. While a few activities are relatively specific to the monument, most subsistence pursuits occur across the landscape without regard to political boundaries. Depending upon such variables as weather, wildlife movements, surface conditions affecting travel, and changing socio-economic conditions, an activity that is intense one year may be light or even absent the following year in the monument. A description of the typical subsistence use pattern over an annual cycle follows:

Late winter (February-March) - Hunting of ringed seal, arctic hare, caribou. Gathering of driftwood and wood for firewood. Fishing for Bering cisco and whitefish. Trapping white fox, red fox, wolverine, wolf, and occasional lynx.

Early spring (March-April) - Hunting of ringed seal, early spring waterfowl, ptarmigan, grizzly bear. Trapping white fox. Collecting firewood.

Mid-spring (May) - Hunting of ringed seal, migratory waterfowl, ground squirrels. Collection of bird eggs. Gathering of willow leaves and other edible plants.

Late spring (June-July) - Hunting of bearded seal, ringed seal, spotted seal, beluga whale. Collection of bird eggs. Fishing for Arctic char, whitefish, tomcod herring, smelt. Gathering of edible plants and collection of driftwood for fuel.

Summer (July-mid August) - Occasional hunting of waterfowl and caribou. Gathering of edible plants. Fishing for whitefish, chum salmon.

Early fall (mid August-mid October) - Hunting of waterfowl, caribou, grizzly bear, Dall sheep, ptarmigan, and an occasional walrus. Fishing for whitefish. Collection of mussels and clams.

Late fall (mid October-November) - Hunting of caribou, waterfowl, seals, ptarmigan. Fishing for whitefish, arctic cod. Trapping of wolves, wolverine, white fox, red fox, and occasional lynx. Gathering of driftwood and wood for firewood.

Mid-winter (mid December-January) - Occasional hunting of caribou. Trapping of furbearers. Gathering of firewood.

Among the most recent studies of subsistence use patterns that relate to the annual cycle in the area of the monument are studies undertaken as part of Cominco Ltd.'s environmental baseline studies for the proposed Red Dog Mine (January 1983). These studies include information that is limited, geographically, to an area which the proposed Red Dog Mine might affect. In general this means that the more detailed information presented does not consider the southeast one half of the monument or use by residents from Kotzebue or Sheshalik Spit.

Residents from Noatak intensively hunt caribou in the Mulgrave Hills. Char fishing occurs in lower Rabbit Creek and sea mammals are hunted along the entire coastline of the monument. Waterfowl hunting is concentrated around Imik Lagoon and along the lower portion of Kilikmak Creek.

Residents of Kivalina similarly hunt caribou in the Mulgrave Hills but also seek them out in the Kakagrak



Hills south of Kilikmak Creek and north of Krusenstern Lagoon. Sea mammals are hunted along the monument's coastline but normally only south to Imik Lagoon. Bowhead whales are hunted in the same area. Similarly, trapping, hunting waterfowl and gathering greens, eggs, and berries occur in a zone near the coast from Imik Lagoon north.

The NANA Coastal Zone Resource Service Area (1984) reports intensively used areas in the monument include the Sheshalik Spit area, Cape Krusenstern, the mouth of Rabbit Creek and the Ipiavik Lagoon area.

Residents of Noatak, Kivalina, Kotzebue and Sheshalik travel widely in pursuit of subsistence resources. "No one year can be taken as a normal year... subsistence living and all it entails does not function that way." (Uhl 1980)

In response to economic, social, and technological changes, there have been alterations in subsistence strategies. The individual or a relatively small number of persons can usually accomplish hunts and other activities that once required the effort of large cooperative bodies of participants. Time and effort once required to obtain food for dog teams is now directed toward acquiring cash to purchase and support mechanical vehicles. Wage employment, schools, modern homes, and other factors, tend to limit the time which can be allotted to subsistence, so that harvest activities often occur in "bursts" of intense activity rather than long-term sustained subsistence practices. There is also the tendency for smaller numbers of persons to carry out subsistence harvests for their families, while others pursue wage earning employment or offer other types of support services.

As residents have continually adapted to changes in their environment and to fluctuations in the availability of natural resources, so might change be expected to continue. Perhaps the only trend which could be safely predicted is that change will come more quickly than it has in the past. Programs, such as NANA's Spirit Program have been established in the region in an attempt to retain important cultural links to the Inupiat's past.

#### Implications

- 1.) Subsistence, as an economic system, is the "lifeblood" of the people in the region.
- 2.) Rapid loss of subsistence opportunities would severely impact the social fabric of the Inupiat people.
- 3.) Local people's use of subsistence resources in the monument varies seasonally and annually.





# PRIMARY SUBSISTENCE USE AREAS

Cape Krusenstern  
National Monument

Kobuk Valley National Park

Noatak National Preserve

United States Department of the Interior  
National Park Service

189 80017  
ARO DEC84

0 10 20M  
0 10 20KM



- 4.) Although many good sources of information do exist consistent long term information on subsistence use in all the monument is not available.
- 5.) Economic, social, and technological changes will continue to alter subsistence use patterns of people in the region and in the area of the monument.
- 6.) Some modern tools of subsistence users like ATVs can damage and or conflict with archeologic resources in the monument.

#### Subsistence Resource Commission

Directed by ANILCA section 808 the National Park Service has established the Cape Krusenstern National Monument Subsistence Resource Commission. The commission is charged with broad powers which could affect regulations governing subsistence hunting in the monument. Specifically, they are to propose a subsistence hunting program to the Secretary of the Interior and the Governor of Alaska. At its first meeting in Kotzebue on May 3 and 4, 1984, the commission elected its officers, listed immediate concerns of members and scheduled future meetings. Through these meetings the commission is expected to begin to fulfill its mandate. All meetings are open to the public and are announced in the Federal Register.

#### Implications

- 1.) The National Park Service must continue to work closely with the Subsistence Resource Commission providing staff support and analysis of their work and recommendations.
- 2.) Recommendations of the commission have dramatic potential to change subsistence hunting regulations in the monument.

#### Water Rights

In Alaska, two types of water rights can be applied for under state laws and regulations. Administered by the Alaska Department of Natural Resources procedures are set forth for "appropriative water rights" in AS 46.15.260 and for "reservation of instream flow" in AS 46.15.030. To date, no one has applied for either legal right within the boundaries of the monument.

Implications Filing for "reservation of instream flow" with the State of Alaska is a mechanism that could be utilized by the National Park Service to afford increased protection of natural and subsistence resources within the monument.



## Communications

Two automated radio repeater stations have been set up in the park units in Northwest Alaska, in order to broaden the coverage of radio contact within the national park units. One of these repeaters is within Kobuk Valley National Park, on Mount Angayukaqsaq, the other is located on Mount Noak, the highest peak in the monument.

## Uses, Activities, and Trends on Adjacent Lands

Uses and activities on lands adjacent to the monument are similar to those that occur inside the monument. Land managers include the State of Alaska, Bureau of Land Management, NANA, and Kikiktagruk Inupiaq Corporation. A very small percentage of land is also privately owned. Typically people hunt, fish and trap on these lands as well as travel across them from village to village. Snowmachines and boats are the most typical modes of transportation utilized. Other subsistence activities including gathering berries, eggs, and cutting wood occur throughout the area. Some recreational activities may occur on these lands and waters although very little information is readily available on their extent.

Primary users of these lands are residents of Kotzebue, Kivalina and Noatak although other people throughout the region are known to occasionally utilize them too. Kotzebue is only seven miles from the southeast corner of the monument. Commonly, Kotzebue residents utilize a broad area of land within and around the monument, as well as land to the south and to the east of Kotzebue itself.

People from Noatak, located only nine miles from the monument's eastern boundry typically hunt, fish and trap throughout the year. In the summer months some people move south to Sheshalik Spit (within the monument) to fish and hunt marine mammals. Other people move seasonally so they can work in a segment of the cash economy.

People from Kivalina live on a narrow barrier island situated between the Chucki Sea and Kivalina Lagoon. Only 10 miles to the north of the monument they too hunt fish and trap throughout the year. Their location on the coast affords them better accessability to marine mammals and therefore they spend more time hunting these species than people from Noatak or Kotzebue. Like their neighbors in Noatak some people move to work in a segment of the cash economy during the summer months.

Throughout most of the year however, residents depend upon the land for their subsistence.

Although not much data is available upon which to base trends some things can be projected forward with some confidence. Foremost is the change that the Red Dog Mine would bring to the land and the uses upon it. Construction and operation activities of the mine will bring hundreds of people, some from local villages and some from outside the region, and equipment and machinery to an area where similiar previous activity is unknown. The road linking the mine site and the port will open access to the area, although actually getting to the port by water would remain difficult for non-industrial traffic.

There are local concerns that industrial activities could disrupt various subsistence activities, especially the caribou migrations. This topic has been and continues to be discussed between private parties and government agencies associated with the management of lands in the region.

The Western and Arctic Alaska Transportation Study (WAATS) completed in 1981 for the Alaska Department of Transportation and Public Facilities indicated a potential transportation route across the monument. In that study a road, railroad, and coal slurry line were shown as possibilities, in one corridor crossing the southern one third of the monument, from east to west. A port site at Cape Krusenstern is also indicated. Current thinking suggests that if the Red Dog Mine proposal is constructed the alternatives in the WAATS study could be put aside.

Other uses in the area, fishing, hunting, trapping, travel, commercial fishing and recreational activities are anticipated to continue along at about the same level. As additional new technology emerges, and as population in the region changes, so might the levels of use.

It is thought that further mineral exploration may occur on State selected and patented lands to the north and east of the monument.

#### Implications

- 1.) Land use decisions by adjacent land managers can affect resources inside the monument.
- 2.) Decisions by land managers, other then the National Park Service, will affect the Red Dog Mine proposal.
- 3.) Development of the Red Dog Mine, and continued exploration of the area may impact the monument's resources.

Proposed Red Dog Mine The proposed Red Dog Mine (lead and zinc) will be located approximately twenty five miles to the northeast of the monuments northeast corner, or 90 miles north of Kotzebue.

The proposed mine site is located on land owned by NANA and would be developed in cooperation with Cominco Ltd. The proposal calls for the development of an open pit mine, a mill and an accommodation complex onsite. A 57 mile road, approximately half of which would be in the monument, would be built to connect the site with the coast. At the coast a port 10 acres would be constructed and approximately two and one half miles inland from the port there would be a 9-acre storage facility for the ore awaiting shipment, both facilities would be inside the monument.

Cominco Ltd. has filed for an ANILCA Title XI Right-of-Way permit and an Environmental Impact Statement has been completed. Additionally, NANA has proposed the Cape Krusenstern Land Exchange which would involve trading various lands to consolidate ownership and to simplify management for all parties. The exchange would put the headwaters of several drainages into the monument and thereby guarantee protection of various types of wildlife habitats.

It is predicted by Cominco Ltd. that the mine is of sufficient size to influence world markets for several decades. An infusion of money into the region's cash economy would undoubtedly occur during both the construction and the operation periods. The operations phase is expected to last approximately fifty years. Cominco Ltd. has made commitments to NANA to train and hire local residents for jobs during both phases, this may provide greater stability to the regional economy.

#### Implications

- 1.) Red Dog Mine facilities proposed inside the monument can be constructed only after ANILCA Title XI procedures are completed and a right of way is approved, or after a land exchange occurs.
- 2.) The Red Dog Mine proposal can affect subsistence resources within the monument and has had a subsistence evaluation (ANILCA 810) completed.



## MANAGEMENT ALTERNATIVES





### CHAPTER 3

#### MANAGEMENT ALTERNATIVES

Two alternatives are presented for the management of Cape Krusenstern National Monument. Following public review of this draft general management plan, the National Park Service will formulate a final plan for management of the monument. The final general management plan will reflect the public and agency comments received on this draft plan, and any new, relevant information that may arise during the comment period.

Alternative 1 is the alternative preferred by the National Park Service at the present time. Alternative 2 consists of the continuation of existing management actions, the status quo, and is considered to be the "minimal level" of management necessary to fulfill legislative mandates establishing the monument.

Reviewers are encouraged to consider not only the two alternatives proposed but a mixture of the two and other considerations that may have been omitted. A chart comparing the two alternatives in a summary form is on page 3-52.

## PREFERRED ALTERNATIVE (ALTERNATIVE 1)

### CULTURAL RESOURCES MANAGEMENT (ALTERNATIVE 1)

The primary purpose for the creation of the monument was the protection of a series of archeological sites. Section 201(3) of ANILCA states:

The monument shall be managed.....to protect and interpret a series of archeological sites depicting every known cultural period in arctic Alaska; to provide for scientific study of the process of human population of the area from the Asian Continent; [and] in cooperation with Native Alaskans, to preserve and interpret evidence of prehistoric and historic Native cultures....

The importance of these resources is supported by their inclusion in the National Park System and their placement on the National Register of Historic Places as an archeological district. The monument is entirely within the archeological district. Because of its international significance, it has been nominated by the United States to the World Heritage List of Cultural Parks. On a practical level, this means that all archeological sites in the monument will receive certain levels of protection before any action can occur which might affect these cultural resources.

The National Park Service proposes to carry out a slightly more active management strategy than has been followed in the past four years by identifying, recording, evaluating, preserving, protecting and interpreting all significant cultural resources in the monument. These actions will be implemented through the Cultural Resources Management section of the monument's Resources Management Plan which is updated annually to reflect changing needs and priorities. Changes should be anticipated because of the Red Dog Mine proposal and preparations made, as appropriate, by monument staff.

The cultural resources in the monument will be managed for preservation and protection in a manner consistent with federal and state laws, as well as National Park Service policies and regulations. A basic principle of this management strategy is preservation. In other words, leaving resources in place rather than excavating or collecting them will be the standard method for dealing with cultural resources. The National Park Service will waive this policy only when the resources are threatened with imminent damage or when there is a significant potential for legitimate scientific research

that would expand our knowledge of the history or prehistory of the region. This research would be allowed only when there are no sites outside the monument that would provide such data. Research would be controlled through the National Park Service permit process.

Developments in the monument will be designed to be compatible with the cultural fabric and to avoid or minimize adverse effects on cultural resources. Development with potential for disturbance, either directly or indirectly, will be preceded by archeological clearances. When appropriate, the State Historic Preservation Officer and the Advisory Council on Historic Preservation will be given the opportunity to comment on those developments and their impacts before they are constructed. Before any actions with potential for impacts upon traditional sites are undertaken, local native Americans will be consulted.

The National Park Service also proposes that recovered artifacts should not permanently leave the northwest region of the state. Rather, a museum for the care and exhibit of collections would be established in Kotzebue and house collections on a permanent basis (see the recommendations for facilities in Kotzebue, page 3-41). It is proposed that a research project be undertaken to inventory all extant collections that originated in what is now the monument because a major cultural resource exists in the collections that are now located throughout the world.

Additionally this alternative proposes to continue or initiate the following actions:

- 1.) Conduct a cultural resources inventory in the monument to identify and evaluate new and presently unknown sites.
- 2.) Develop a monitoring program to assess the effects of ongoing activities on sites within the monument.
- 3.) Obtain ownership of land containing primary resources for which the monument was created (see the Land Protection Plan, chapter 4). In those cases in which fee simple acquisition is not necessary, enter into cooperative agreements or employ other methods to protect resources on private land (see the Land Protection Plan, chapter 4).
- 4.) Protect by use of ranger patrol sites on federal land from "pot-hunting" and vandalism.
- 5.) Develop a program in cooperation with Native Alaskans to interpret and preserve evidence of prehistoric and historic Native cultures.
- 6.) Research and record, for possible adaptive use, the old mail cabin near the mouth of the Tukrok River.



The National Park Service has protected and proposes to continue to protect prehistoric and historic resources from fires that might threaten the resources. This protection is accomplished through participation in the interagency fire plan (see Fire Management, p. 3-14) which calls for immediate suppression efforts on all known sites.

Significant archeological resources are also known to be located on several Native allotments, all potentially private land. After further research and an evaluation of their significance, the National Park Service would initiate acquisition procedures or seek cooperative agreements or other forms of protection for management of these lands to protect their resources (see Land Protection Plan, Chapter 4 for more detail).

A comprehensive inventory of the known archeological resources of the monument and a reconnaissance-level survey for new sites would be conducted and an archeological resources base map would be prepared and regularly updated. Possible changes in land ownership or land uses resulting from the proposed Red Dog Mine could necessitate rapid updating and a shifting of work priorities. This data base would be used to develop and update a Cultural Resources Management Plan for the monument to serve as the programming document for active management of these resources. From this inventory a Cultural Sites Inventory list would be compiled. This list, with maps and site records, would be kept up to date and serve as a primary reference for management of archeological sites in the monument.

Section 14(h)(1) of ANCSA authorizes the transfer of historic and cemetery site lands to Native corporations. Transfer is dependent upon selection by NANA and KIC, adjudication by the Bureau of Land Management, and verification of historicity by the Bureau of Indian Affairs. To date none of the sixteen sites selected in the monument have been transferred. When and if transferred, they must be managed for preservation of their historic resources by the corporations. The National Park Service has and would continue to protect and manage all 14(h)(1) sites as if they were eligible for inclusion on the National Register. The National Park Service recognizes that these sites may represent sacred or otherwise traditionally important sites and are potentially closely associated with the very purposes for establishing the monument. After adjudication and verification, any sites not conveyed would be properly evaluated to determine their level of historic significance and managed accordingly. The National Park Service would encourage the participation of NANA, KIC, Maniilaq Association, the State Historic

Preservation Officer and any other interested groups, agencies or individuals in developing methods of protection, preservation and interpretation of these sites.

Should these ANCSA 14(h)(1) sites within the monument be transferred, the National Park Service would actively pursue cooperative agreements with NANA or KIC to achieve similar management goals as those expressed above.

#### Prehistoric Resources on Private Lands

The National Park Service would encourage and assist private landowners within the monument and individuals, groups, Native corporations and the State of Alaska in the vicinity to protect and preserve prehistoric resources on their lands.

#### Historic Resources

An Historic Resource Study would be conducted as part of the comprehensive inventory. Oral and written information would be collected from early residents of the area. Any cabin sites or ruins scattered throughout the monument and all other above-ground structures would be located and their historical, architectural and cultural values would then be professionally evaluated. From this inventory, a List of Classified Structures would be prepared. Potential classified structures, like the old mail cabin near the mouth of the Tukrook River, would be evaluated for adaptive and interpretive uses. These properties would then be protected and interpreted as appropriate.

#### Historic Resources on Private Land

Wherever possible, the National Park Service would encourage the owners of historic properties on private land within the boundaries of the monument to nominate them to the National Register. The National Park Service would provide technical assistance and advice in the proper care and treatment of such properties.

#### Collections Management

A Scope of Collection Statement has been written to guide the monument staff in the acquisition and management of museum objects. All monument collections, including archeological artifacts, natural history specimens, library and archival materials, records and museum collections, will be managed in accordance with this statement and relevant National Park Service guidelines and policies.

## Cultural Resource Research Recommendations

A list of proposed projects for the cultural research component of the resources management plan include:

- 1.) Cape Krusenstern National Monument Cultural Resources Inventory
- 2.) Archeological Site Monitoring and Impact Survey
- 3.) Archeological Collections Inventory Project
- 4.) Cape Krusenstern Ethnohistory and Oral History Project

## NATURAL RESOURCES MANAGEMENT (ALTERNATIVE 1)

The natural systems within Cape Krusenstern National Monument have, to date, remained largely unaltered by man. This condition is due to the remote and rugged nature of the area and the sparse human use of resources for subsistence purposes. With the use of new technologies in the region and the emerging requirements for access through the monument, the National Park Service needs to be able to identify and respond promptly to proposals or potential impacts on resources.

The current emphasis in natural resources management is to study natural systems so that base line data can be developed. It is proposed to continue these efforts, but with an increased emphasis. Some work has already been done by the State of Alaska, the National Park Service, other government agencies, universities and private organizations. A need exists to gather and synthesize this past work, and then to plan and carry out effective programs for greater resource understanding and protection.

Collections made during the research process would be categorized into the monument's collections in accordance with existing regulation 36 CFR 2.5. They would be housed in the administrative offices or the proposed museum.

The objectives for natural resources which this research would help to achieve in Cape Krusenstern are threefold: first, to perpetuate and interpret natural resources and processes; second, to devise and implement subsistence programs which fulfill the intent of ANILCA; and third, to provide for the enjoyment and appreciation of the natural features of the monument by visitors.

A portion of the monument surrounding Cape Krusenstern totaling 209,360 acres has been identified as a potential National Natural Landmark by the Department of the Interior.

## Ecosystem Approach

National Park Service policy requires that the management of lands possessing significant natural features and values be concerned with ecological processes and the impacts of people upon these processes and resources. The concept of perpetuation of a total natural environment or ecosystem, in contrast to the protection of individual features or species, is a distinguishing aspect of the National Park Service's management of natural lands. The major ecosystems within Northwest Alaska have received little comprehensive study in the past. It is recognized that a fuller understanding of the natural movements and interplay of energy and materials within major ecosystems is crucial to effective management decisions affecting the monument and other National Park Service areas in the region.

Of particular interest are the impacts upon natural systems of existing and potential future modes of transportation across the monument. While current transportation is largely limited to the use of snowmachines, motorboats, ATVs and aircraft between the monument and surrounding villages, there is increasing pressure to develop larger transportation systems that will facilitate economic development.

## Air Quality

The National Park Service is mandated to protect habitat for seals, other marine mammals, birds, and other fish and wildlife resources so that their populations remain natural and healthy. The prevention of significant deterioration of air quality and its secondary impacts on wildlife habitat in the monument is crucial to fulfilling this mandate.

Cape Krusenstern is currently classified as a class II airshed under the provisions of the Clean Air Act as amended (42 USC 7401 et seq.). The National Park Service proposes a monitoring program to provide base line data on air quality of the monument against which future sampling can be compared.

## Water Quality

Maintaining the quality of waters within the monument is important to man and to all wildlife species. The National Park Service would maintain it in a manner consistent with both the regulatory parameters of the Alaska Department of Environmental Conservation and the U.S. Environmental Protection Agency. Both departments



would be consulted prior to the development of any permanent facilities.

The National Park Service proposes a monitoring program to provide base line data on water quality of the monument against which future sampling could be compared.

#### Fish and Wildlife Management

The National Park Service recognizes the importance to residents of Kivalina, Noatak, and Kotzebue and to others within the region of activities on lands within and adjacent to the monument. These activities include subsistence hunting, fishing and trapping. In accordance with ANILCA which mandates the maintenance of natural and healthy wildlife populations and with National Park Service policy, management would continue to work to maintain the natural abundance, diversity, behavior and ecological integrity of native animal populations within the monument. The National Park Service in its responsibility for maintaining natural and healthy fish and wildlife populations would continue to work with the state's fish and game management system. The National Park Service and the Alaska Department of Fish and Game have a master memorandum of understanding which presents the general policy guidelines by which the two agencies agree to operate concerning the management of fish and wildlife resources and their habitats (see appendix B). The memorandum of understanding is in compliance with Section 1314 of ANILCA. For the life of this plan the National Park Service would manage fish and wildlife resources in accordance with this memorandum or any jointly revised memoranda.

In cooperation with the National Park Service, the Alaska Department of Fish and Game is responsible for establishing fishing and hunting regulations and for maintaining natural and healthy fish and wildlife populations according to ANILCA. The department licenses both commercial and sport fishermen, and it sets seasons and bag limits. The National Park Service would continue to provide its recommendations and to cooperate with the department whenever possible in setting seasons and limits that are compatible with monument management.

Subsistence harvest of fish, wildlife, and related resources on federal lands and waters in Alaska is also controlled by the Alaska Department of Fish and Game and the State Boards of Game and Fisheries under provisions of ANILCA and Alaska's statutes.

Sport fishing, subsistence hunting, fishing and trapping are permitted within the monument. If the taking of fish or game results in threats to the natural and healthy populations of any species, the National Park Service may promulgate regulations concerning consumptive uses of resources which are more restrictive than the laws and regulations of the state. It should be noted that in any effort by the National Park Service to regulate consumptive uses of resources, the nonwasteful subsistence uses will be given priority over the taking of fish and wildlife for other purposes, such as sport fishing (ANILCA, Sec. 804 and F.R., Vol. 46, No. 116, Sec. 13.40(c)).

The National Park Service would continue to review priorities, regulations and harvest limits established by the Alaska Department of Fish and Game and would provide its recommendations to that agency. In addition, the National Park Service would seek, during the life of this plan, to strengthen enforcement of hunting regulations through closer cooperation with the State of Alaska and conceivably with NANA and Cominco Ltd., if the Red Dog Mine becomes operational.

Because the perpetuation of natural and healthy wildlife populations in the monument is a major concern of the National Park Service, it is important that the harvest of wildlife for subsistence purposes is regulated in consideration of the most comprehensive data available for the region. Annual census work is performed for major big game species in Northwest Alaska by the Alaska Department of Fish and Game and affords important information about the health of specific wildlife populations. A comprehensive compilation and analysis of existing historical data is proposed. It would be accomplished by National Park Service's Northwest and Alaska Regional Office personnel. Information gaps would be identified and goals for additional research would be established. In addition to ongoing census work and as funding became available in the future, the National Park Service would contract research work from universities and other agencies to meet these resource goals.

A coordinated system between the National Park Service's Alaska Regional Office and Alaska Department of Fish and Game is proposed to obtain statewide harvest ticket information divided into regions, park units, and game management units. This effort should utilize local Alaska Department of Fish and Game advisory boards, the Alaska Department of Fish and Game Subsistence Division, National Park Service Subsistence Resource Commissions and the subsistence coordinator of the National Park Service Alaska Regional Office's. This data could then

be utilized by park managers to identify problems associated with specific species and to undertake appropriate management actions.

The existence within and use of the monument's habitat by threatened and endangered wildlife species are not well documented. While sightings of peregrine falcon have been recorded in the past, a more systematic survey is needed and is proposed. Also proposed is a gathering of base line information about the importance as a fall staging area of the Cape Krusenstern and the Sheshalik area to migrating birds, including geese, ducks, shorebirds, gulls, and swans.

Fluctuations in caribou and moose populations in the region are not well understood. For the purpose of coordinating habitat research for these species, a cooperative agreement is proposed to be initiated by the National Park Service Alaska Regional Office with other agencies including the Fish & Wildlife Service, Bureau of Land Management, Alaska Department of Fish and Game, and Soil Conservation Service. Each cooperating agency would identify and assume its research responsibility commensurate with its available funding level and related to its specific lands and interests. The goal of the joint effort would be to assemble within the region a mosaic of habitat types and their uses by these large mammals. Additionally, the work could be coordinated with the Alaska Department of Natural Resources which is undertaking a regional land use plan for the region in 1985-1986 and the NANA/Cominco partnership if the Red Dog Mine becomes operational. This approach is consistent with regional research policies as stated by numerous participants who attended the 1984 NANA Regional Strategy meetings held in Kotzebue, November 1984.

A similarly structured cooperative agreement is proposed for the study of seals and other marine mammals that utilize offshore habit but are known to haul out on the beaches of the monument.

A research project for the small musk ox herd which frequents the monument and the lower Noatak drainage is proposed to provide guidance regarding impacts by the existing herd. This could be accomplished jointly by the Alaska Department of Fish & Game and the National Park Service. The project would also assess the potential impacts of increased herd size resulting from additional musk ox reintroductions in Northwestern Alaska, should they be undertaken by the State of Alaska.

Dall sheep which moved into the Igichuk Hills in the southern portion of the monument in the early 1970's today number approximately 20. The National Park Service considers this herd too small and isolated to be subject to any harvest pressure and remain viable. Thus it is recommended that the Alaska Board of Game, in consideration of joint National Park Service and Alaska Department of Fish & Game (Singer, et al., 1983) research on Dall sheep, close the Igichuk Hills to either sex hunting of Dall sheep.

While the major fisheries in the northwest Alaska region are productive by arctic standards, a combination of short summer seasons, cool temperatures and limited food combine to limit growth rates of some resident fish and increase their susceptibility to damage by overharvest. Recent increase in harvest pressures on all species warrant that more base line information on populations and pressures upon them be collected. The National Park Service proposes establishment of a cooperative agreement with Alaska Department of Fish and Game to continue and to expand fisheries research within the region to be performed on a joint basis. Actions should include a formal sharing and a review of information regarding northwest Alaska fisheries and, therefore, a more effective system of problem identification and definition of research needs.

### Minerals Management

The public land within the monument is closed to new mineral entry and there are no valid mineral claims within the monument. Should unpatented mining claims occur (through land exchanges, trades, navigability determinations, etc.) they would be subject to National Park Service regulations governing mining operation and access to mining operations (36 CFR part 9A and 13.15). Plans of operations would be reviewed by appropriate federal and state agencies to ensure that mining operations would be in compliance with state and federal regulations and that adverse effects on resources and other uses would be minimized.

The U.S. Geological Survey is conducting an "Alaska Mineral Resources Assessment Program." The National Park Service intends to work cooperatively with this agency and other public and private entities to carry out, as appropriate, the legislated responsibility to assess oil, gas and other mineral potential on lands within the monument (Section 1010 ANILCA).



## Paleontological Resources

Fossil resources within the monument are protected by existing laws and regulations. The significance and extent of the monument's fossils are not well known. The National Park Service would welcome interested agencies and universities who apply for scientific research permits to add to the information about these fossils.

## Vegetation

In accordance with ANILCA and federal regulations (36 CFR 13.49) gathering fruits, berries, and other plant materials including stems, roots, leaves and flowers by local residents for subsistence purposes is permitted in the monument. Noncommercial gathering of dead or downed trees for firewood is also permitted in the monument.

The cutting of trees less than three inches in diameter at ground level by local rural residents is permitted. Live standing trees of diameter greater than three inches at ground level are not to be taken without a permit from the superintendent.

The National Park Service would not use wood from the monument for construction materials, thereby avoiding additional harvest pressures on forest resources.

An effort to identify the current status, regenerative capability, and importance of existing forest resources within the monument and the NANA region is proposed to be jointly undertaken by the National Park Service, NANA, KIC, State of Alaska, and Bureau of Land Management.

## Fire Management

The National Park Service is a participant in the Kobuk Interagency Fire Management Plan, which encompasses an area of 32 million acre areas. All lands within the monument are within the area. This Fire Management Plan coordinates fire suppression management objectives of all the participating landowners; it was completed and put into operation for the 1984 fire season.

In accordance with the fire management plan, the suppression objective for the monument is to allow natural forest and tundra fires to burn, unless they threaten private lands or certain identified cultural sites and thereby necessitate suppression measures.

Additionally, the National Park Services proposes to continue work initiated in 1984 in Kobuk Valley National

Park. This research, when completed, would enable the National Park Service to develop a fire management program consistent with the interagency fire suppression plan. It could result in the prescription for controlled burns in the future years which could provide greater degrees of protection for monument resources and for private lands.

#### Navigable Waters, Submerged Lands, and Tidelands

The National Park Service, as directed by ANILCA, would continue to manage all waters within the boundaries of the monument until determinations of navigability are made by the Bureau of Land Management. One area has been determined navigable by the BLM, that being the approximately 10,000 acres of coastal water in the monument's southeastern township which encompasses the Sheshalik Spit area. The National Park Service will work with appropriate State agencies to insure that existing and future activities occurring on submerged lands underlying these waters within the monument's boundary are compatible with the purposes for which the monument was created.

Submerged lands and tidelands adjacent to the monument are in state ownership. Although these adjacent lands are not under National Park Service jurisdiction, they are important to many of the monument's resources and the use of the monument. Future uses of the submerged lands and tidelands could have detrimental effects on the monument resources, particularly seals and other marine mammals, and on visitor or subsistence use of the monument. Such uses could include commercial removal of sand and gravel on tidelands, ocean floor mining, and gas and oil development.

The National Park Service would work cooperatively with the state regarding submerged lands and tidelands to assure that resources of the monument are not negatively affected. The National Park Service would encourage the state as they undertake their Northwest Regional Land Use Plan to consider the purposes of the monument and to recommend land uses for state submerged lands, tidelands and lands underlying navigable water bodies that are compatible with monument uses. Mineral closing orders for these submerged and tidelands would be appropriate. Additionally, the National Park Service encourages the state to carefully consider appropriate protection for seals and other marine mammals in the waters adjacent to the monument.

## Water Rights

The National Park Service recognizes that no problems currently exist with regard to water rights in the monument. It does, however, recognize that the protection of fish and wildlife resources, recreation and the continued opportunity for subsistence uses are directly related to water rights. The National Park Service proposes to seek additional legal protections for water rights in the monument by requesting them through the State of Alaska's in-stream flow reservation procedure as allowed for by Alaska Statute 46.15.030. This statute allows reservation of instream flow for protection of fish and wildlife habitat, migration and propagation, for recreation, navigation and for sanitary and water quality purposes.

The National Park Service also solicits the interest of other affected agencies who are entitled to utilize the Alaska Resources Development Fund (AS 37.11.040). Conceivably this fund can be utilized to provide financial assistance for studies necessary to document and justify instream flow reservations (U.S. Dept. of Interior 1982).

## Natural Resource Research Recommendations

The interim Resources Management Plan for Cape Krusenstern National Monument, Kobuk Valley National Park and Noatak National Preserve describes in detail the scope of scientific research to be undertaken so that a better understanding of resources in the monument will be achieved and utilized in future resource-related decision making. It is recognized that the region in general, and specifically the monument, lacks a scientific information base often available for other parts of the state. Because of the lack of the information base this alternative stresses the need to accomplish research for the area. It is also recognized that funding levels in the near future will not be adequate to accomplish all the research described in the interim Resources Management Plan. The National Park Service will continue to work with other agencies and organizations and will encourage independent research through universities and organizations to accomplish its research goals consistent with methods endorsed at the 1984 NANA Regional Strategy meetings in Kotzebue and with National Park Service policies. A prioritized list of projects for the natural resources component of the resources management plan follows:

## Natural Resource Research Recommendations

<u>Priority</u>	<u>Project Title</u>
1.	Population data: big game and fur bearing species.
2.	Role of natural fire in Northwest Alaska ecosystems (Northwest Area fire management plan).
3.	Base line study of the genetic characteristics and monitoring of Noatak River chum salmon.
4.	Compilation and analysis of big game harvest information on all harvested species.
5.	Base line study of ecosystem dynamics within the Northwest Areas.
6.	Study and monitoring of ungulate caribou and moose habitat.
7.	Study of the impacts of existing and proposed methods of transportation on Northwest Alaska ecosystems.
8.	Analysis and monitoring of conflict between subsistence and recreational users.
9.	Musk ox cooperative research and reintroduction study.
10.	Endangered species inventory and monitoring cooperative survey.
11.	Base line research on waterfowl and shorebirds with emphasis on Cape Krusenstern and Sheshalik Spit.
12.	Cooperative base line research on fisheries populations and pressures.
13.	Base line research into the potential for mineral extraction.
14.	Impact study on popular visitor use areas.
15.	Air quality monitoring.
16.	Water quality monitoring.
17.	Cooperative timber inventory.

The Resource Management Plan, once completed, will be updated annually. The Alaska Department of Fish and Game, other state and local agencies, NANA, KIC and other public and private interests will be invited to participate in this ongoing planning effort.

### PUBLIC USE (ALTERNATIVE 1)

#### Information and Interpretation

Information and interpretation would be provided to monument users for the purposes of public safety, understanding and enjoyment of the monument and avoidance or minimizing conflicts between user groups and damage to monument resources. It would be offered in a variety of ways and in several places depending



upon the time of year and future funding. Methods of delivery include brochures, scheduled interpretive talks and presentations, displays, slides, movies and informal talks with monument personnel. These could occur in a number of different places including the visitor center, administrative office, museum, ranger stations and informally anywhere a ranger might be encountered.

The National Park Services proposes that an interpretive prospectus be prepared to define the monument's interpretive themes. Interpretive themes would basically focus on the primary purposes and resources of the monument. These include:

1. Interpretation of the monument's archeological sites, including known cultural periods in arctic Alaska.
2. The opportunity to scientifically study the processes of human habitation of the area from Asia.
3. Natural and subsistence resources of the monument and adjacent lands.
4. Subsistence activities in the monument.

The National Park Service would also publish an updated brochure that would be distributed upon request. The brochure would present general information on resources, current subsistence uses and recreational opportunities in the monument, methods of avoiding conflicts between user groups, bear behavior and safety techniques, locations of private lands, hazards to public safety and other specific topics as needed. Additional brochures, similar to the Alaska Department of Fish and Game brochure on bear safety, would also be distributed.

The National Park Service would continue to conduct scheduled programs upon request. These programs would include information about the local areas and various resources administered by National Park Service, the significance of the monument, National Park Service areas throughout the United States, career opportunities, including local hire, in the National Park Service and other topics of interest or request.

The National Park Service would continue to visit each village annually, and preferably more frequently, to make presentations to people in the villages. These presentations would also stress opportunities for local employment (local hire) with the National Park Service.

The National Park Service would try to have presentations translated into Inupiaq by a local volunteer so that all village residents would be better able to understand the information. Additionally, the

National Park Service would continue to work with the NANA Strategy Lands Subcommittee which is investigating how to improve communication between agencies and people in villages.

The primary location for disseminating information and presenting interpretive programs would be the National Park Service visitor center in Kotzebue. This facility would continue to be staffed during the summer with seasonal and local hire employees; informational requests during the winter are and would continue to be handled by personnel in the administrative offices. The expanded visitor center (see page 3-40) would be designed and operated to serve the public interested in the three park units in Northwest Alaska. The visitor center would accommodate up to 50 people at one time. It would have an information desk, space for several small exhibits, restrooms, a small audio-visual room for slide shows and movies (with capacity of 30 people); and space for the sale of books, other printed materials and local crafts of the region. It would additionally have space provided for the storage of interpretive exhibits, slide and movie files, and books and other items essential to the operation of the visitor center. It is estimated that the visitor center would have a total floor space of 1,500 square feet. Other agencies would be invited periodically to utilize small amounts of display space.

At present there is no museum in Northwest Alaska for the exhibition and storage of cultural resources. Consequently, no artifact collection can be permanently maintained in this region of the state. The National Park Service proposes to work with other interested parties to fund and maintain a museum facility in Kotzebue. Other parties might include the State of Alaska, NANA, U.S. Fish and Wildlife Service, City of Kotzebue and the University of Alaska.

Traveling exhibits would be a possible feature of this museum, with exhibits going to the villages in the region in cooperation with existing state museum and local school district programs and to other locations inside and outside Alaska for brief periods of time.

Information about the monument and written interpretive materials would also be available at a ranger station located at the village of Noatak. This office would serve residents of Noatak and non-local recreational visitors who require information about Noatak National Preserve and the monument.

Personnel assigned to a ranger station in the southern end of the monument would provide simple and basic

information and interpretive services for the entire monument, with particular emphasis on the southern half. These services would be provided to monument users on request, and as other duties allow. Personnel would also be trained to discuss the cultural and natural resources of the area, including the archeological and scientific investigations that have occurred in the past. As appropriate and necessary, personnel would explain to non-local monument visitors the current subsistence activities, including caribou and fish harvests that occur within the monument and marine mammal hunting that occurs adjacent to the monument. Personnel would also provide information about recreational opportunities, private lands in the monument and other topics of interest to visitors.

Personnel assigned to a ranger station in the northern half of the monument would, in addition to these duties, provide information about the proposed Red Dog Mine in an attempt to preclude conflict between the out-of-region recreational visitor and the proposed industrial uses.

#### Access

No changes are proposed for legislation or regulations now in effect. However, closure of the monument to the use of pack animals (excluding dogs) is proposed to preclude adverse impact upon the monument and its resources. Accordingly a notice has been published in the Federal Register and the required 60 days public comment period coincides with the 60 day review period for this draft general management plan. It is the determination of the National Park Service that the use of pack animals, other than dogs, would cause unacceptable impacts to vegetation, soils, archeological sites and other resources in the monument.

In all cases access appears to be satisfactory for the various groups, agencies and individuals who require it and is expected to remain so for the life of this plan.

In the event that the State of Alaska asserts a right-of-way under Revised Statute 2477 (42 USC 932) along the Kotzebue to Kivalina Trail the National Park Service, to the extent practical, would work with the state and any other claimant to resolve the extent and validity of the claim consistent with applicable laws, including the purposes for which the monument was established.

The National Park Service would also recommend that all aircraft in the park maintain a minimum altitude above the ground of 2,000 feet whenever possible to avoid

disruption to wildlife and subsistence and recreational uses.

Access for the proposed Red Dog Mine has been sought out by the NANA/Cominco partnership by applying for a right-of-way permit according to ANILCA Title XI. That permit application is currently under review by the National Park Service and the Department of the Interior. Under NANA's Cape Krusenstern Land Exchange proposal access for the road and ancillary facilities would occur on private lands (as a result of the exchange). The primary management action proposed as a result of the Red Dog Mine's requirement for access (from either method) is the establishment of a northern ranger station with the capability to appropriately monitor resulting uses and potential impacts on monument resources and public uses.

To more fully understand the many and varied provisions relating to access, the reader is encouraged to review the access section on page 2-49 and a chart which consolidates legislative and regulatory provisions for access on page 3-22.

#### Commercial Visitor Services

Commercial visitor services presently provided within the monument are chiefly related to air and water transportation and guiding services for a variety of purposes. Private entrepreneurs are adequately meeting the current demand for these services which is very low.

All commercial services in the three National Park Service units in Northwest Alaska are currently managed under a system of commercial use licenses. Commercial use licenses are issued annually to any applicant if the services are "necessary and appropriate" to the use and conservation of the monument unit. Stipulations for conducting commercial services are contained in each commercial use license for the purpose of assuring the protection of monument resources and other uses occurring within monument (for example, subsistence uses) as well as assuring visitor safety and that services are of reasonable value. Each license holder is required to submit a yearly report describing the types of services provided, the number of clients served, the dates when services were provided and the areas of the monument unit where services were provided.

The National Park Service proposes to continue to manage commercial services by employing the present commercial use license system. This allows for the provision of commercial services to the public with minimal associated management costs to both the provider of



# GENERAL ACCESS PROVISIONS FOR SUBSISTENCE AND RECREATION

## CAPE KRUSENSTERN NATIONAL MONUMENT

	<u>SUBSISTENCE</u>	<u>REFERENCE (C)</u>	<u>RECREATION</u>	<u>REFERENCE (C)</u>	<u>CHANGES PROPOSED IN PLAN</u>
SNOWMACHINE	Yes Except: A	ANILCA 811 36CFR13.46	Yes Except: A	ANILCA 1110 36CFR13.10 13.30	None
OFF-ROAD VEHICLES	No	ANILCA 811 36CFR13.46	No	ANILCA 101 36CFR4.19	None
MOTORBOAT	Yes Except: A	ANILCA 811 36CFR13.46	Yes Except: A	ANILCA 1110 36CFR13.11 13.30	None
FIXED-WING AIRCRAFT	No Except: B	ANILCA 811 36CFR13.45	Yes Except: A	ANILCA 1110 36CFR13.13 13.30	None
HELICOPTER	No	36CFR13.13	No	ANILCA 1110 36CFR13.13	None
DOGS, HORSES, AND OTHER PACK ANIMALS	Yes Except: A	ANILCA 811 36CFR13.46	Yes Except: A	ANILCA 1110 36CFR13.12 13.30	Superintendent to permanently close entire monument to use of horses and other pack animals except dogs, as authorized by 36 CFR 13.12.

## FOOTNOTES

- A. The Superintendent may close an area or restrict an activity on an emergency, temporary, or permanent basis. 36CFR13.30.

- B. In extraordinary cases authorized by 36 CFR 13.45.
- C. "ANILCA" refers to sections of the Alaska National Interest Lands Conservation Act of 1980; Part 13 of Title 36 of the Code of Federal Regulations (36CFR13).

SUMMARY  
OTHER ACCESS PROVISIONS

CAPE KRUSENSTEN NATIONAL MONUMENT

<u>PROVISION</u>	<u>REFERENCE</u>	<u>PROPOSALS IN ALTERNATIVES</u>
1. <u>Access to Inholdings</u> (Valid property or occupancy interests)  Ensures adequate and feasible access, so long as access would not cause significant adverse impacts on natural or other values or jeopardize public health and safety.	ANILCA 1110 36CFR13.15 13.31	(Alternatives 1 and 2) Continue to follow provisions of ANILCA and existing regulations.
2. <u>Temporary Access</u> (Applies to State and private landowners not covered in Sections 13.10 through 13.15)  Superintendent shall permit temporary access across a park area for survey, geophysical, exploratory or similar temporary activities on nonfederal lands when determined that such access will not result in permanent harm to park area resources.	ANILCA 1111 36CFR13.16	(Alternatives 1 and 2) Continue to follow provisions of ANILCA and existing regulations.
3. <u>Transportation and Utility Systems</u> <u>In and Across Conservation System Units</u>  Sets procedures for applications and approvals. Must be compatible with purposes for which the unit was established and no other economically feasible	ANILCA TITLE XI	(Alternatives 1 and 2)  Continue to follow provisions of ANILCA and existing regulations. Encourage applicants to avoid the monument and or

<u>PROVISION</u>	<u>REFERENCE</u>	<u>PROPOSALS IN ALTERNATIVES</u>
and prudent alternative route exists; establishes terms and conditions of rights-of-way.		connect to Red Dog Mine road, if constructed.
4. <u>Revised Statute 2477</u> <u>(Rights of Way)</u>	43 U.S.C. 932	(Alternatives 1 and 2)  Work with State of Alaska to determine validity of RS 2477 if the state asserts its existence.
Under federal regulations it is the responsibility of the state to officially assert its claim for any R.S. 2477 rights-of-way. In the absence of judicial findings regarding such claim(s), the National Park Service would consider federal lands free and clear of such encumbrances. Consistent with enabling legislation of the monument and other applicable laws, the National Park Service would cooperate with the state in resolving any R.S. 2477 claims.		
5. <u>Navigation Aids and Other Facilities</u>	ANILCA 1310	(Alternatives 1 and 2)  Continue to follow provisions of ANILCA and existing regulations. Continue use of existing permit to U.S. Coast Guard for navigational aid at Cape Krusenstern.
6. <u>Alaska Department of Fish and Game</u>	NPS/ADF&G Master Memorandum of Understanding	(Alternatives 1 and 2)  Continue provisions of Master Memorandum of Understanding (see Appendix B)
The NPS recognizes the right of the Department to enter onto park lands after timely notification to conduct routine management activities which do not involve construction, disturbance to the land, or alterations of ecosystems.		



<u>PROVISION</u>	<u>REFERENCE</u>	<u>PROPOSALS IN ALTERNATIVES</u>
7. Alaska Mineral Resource Assessment Program	Allows for access by air for assessment activities permitted by ANILCA Sec. 1010 subject to regulations ensuring that such activities are carried out in an environmentally sound manner.	ANILCA 1010 (Alternatives 1 and 2)  Continue to follow provisions of ANILCA and existing regulations.

services and to the government, while containing mechanisms for the protection of the monument's resources and other uses. The superintendent would continue to determine what commercial services are necessary to public use and enjoyment of the monument, and also what services are appropriate based upon the legislatively stated purposes of the monument.

If during the projected 10 year life of this plan commercial services need to be limited in number or be more strictly regulated to prevent unacceptable impacts on the resources or other uses of the monument, a concession permit system would be instituted. Under a concession permit system a numerical limit would be placed upon the providers of one or more commercial services offered within the park unit. For instance, it might be determined that three hiking guide companies could adequately accommodate the demand for these services within the monument. Concessioners would be selected on the basis of their ability to furnish adequate services and to operate in a manner that is compatible with the legislative purposes of the monument.

A commercial services survey might be conducted by the National Park Service if it were believed that monument resources were being adversely impacted or if the public were being inadequately served. Such a survey would assess the quality of commercial services provided to the public in the monument, the impacts of commercial services on resources and other monument uses, and whether public needs are being satisfied by existing commercial services.

When the commercial service study is completed, the National Park Service would determine whether additional commercial visitor services were appropriate and where and when they are required to help fulfill the purposes for which the monument was established. In the meantime the National Park Service proposes to continue requiring commercial operators to obtain the commercial use license. If it were recommended to replace the use of commercial use licences with the more restrictive concessions permits, the National Park Service would issue concession permits and or contracts to commercial operators who operated within the monument prior to January 1, 1979, to the extent practical, able to meet the needs of visitors and operate in a manner consistent with the purposes for which the monument was established (ANILCA 1307).

Revenue Producing Visitor Services. Section 1307 of ANILCA requires the National Park Service in selecting new persons to provide visitor services, except for

guiding sport fishing and hunting, to give preference to the Native corporation(s) directly affected by the establishment of the unit and to residents local to the unit.

The National Park Service has expressly asked representatives of both NANA and KIC about their current interest in revenue producing visitor services as they relate to the monument. Currently, no positive interest was shown. The National Park Service will, however, again contact both NANA and KIC should the commercial use study (proposed) recommend any new commercial services for visitors.

### Commercial Fishing

The proposal recommends no changes in existing legislative (ANILCA 205) or regulatory (36 CFR 13.21) provisions.

The National Park Service proposes to initiate work, in cooperation with the Alaska Department of Fish & Game, to establish use levels within the monument during 1979. ANILCA allows the Secretary of the Interior, after a public hearing, to restrict users of the monument for such things as: camping, cabins, motorized vehicle use... directly related to commercial fishing activities if there occurs a "significant expansion of the use of park lands beyond the level of such use during 1979." By establishing exactly what these levels were, the National Park Service would be able to better carry out the legal mandate of ANILCA.

Additionally, the National Park Service recognizes that the fishing industry is variable; from year to year the number of participants and the number of fish caught fluctuate relative to availability of fish, weather conditions, and market prices. Thus, the National Park Service recognizes that the year 1979 may or may not truly reflect the level of use that typically occurred. The National Park Service is willing to discuss the matter and openly consider alternative measures of the use levels that satisfy the intent of ANILCA.

### SUBSISTENCE MANAGEMENT (ALTERNATIVE 1)

One of the purposes of ANILCA is to provide the opportunity for local, rural residents engaged in a subsistence way of life to continue to do so, consistent with management of fish and wildlife in accordance with recognized scientific principles and the purposes for which each conservation system unit is established (Sec. 101(c)). Section 201(6) of ANILCA permits local residents to engage in subsistence uses within the

monument according to the provisions of Title VIII of ANILCA.

Title VIII of ANILCA addresses subsistence management and uses. Section 802 presents the subsistence policy of ANILCA. This section states that, consistent with sound management principles and the conservation of healthy populations of fish and wildlife, the utilization of public lands in Alaska is to cause the least adverse impact possible on rural residents who depend upon subsistence use of the resources of such lands; that nonwasteful subsistence uses of fish and wildlife and other renewable resources on the public lands shall be given preference over other consumptive uses; and that federal land managing agencies, in managing subsistence activities and in protecting the continued viability of all wild renewable resources, shall cooperate with adjacent landowners and land managers. Other sections of Title VIII give further direction for the management of subsistence.

Section 814 directs the Secretary of the Interior to prescribe regulations, as necessary and appropriate, to implement Title VIII of ANILCA. Regulations which implemented or clarified the provisions of ANILCA, including Title VIII, became effective on June 17, 1981, following a public comment period on proposed regulations. These regulations (CFR 36 part 13) address numerous aspects of subsistence management and uses within park units in Alaska, including determination of which rural residents qualify to engage in subsistence activities in the park units, what means and methods of access may be used in conducting subsistence activities, what laws and regulations apply to the taking of fish and wildlife for subsistence purposes, subsistence use of timber, and how and under what conditions subsistence uses may be temporarily terminated. Residents of the following communities are authorized by 36 CFR 13.62 to engage in subsistence activities in the monument: Kivalina, Kotzebue, and Noatak.

Sec. 805(d) of ANILCA directs that the Secretary of the Interior shall not implement portions of the subsistence provisions if the State of Alaska enacts and implements subsistence preference laws which provide for the taking of fish and game on federal lands for subsistence purposes, and which are consistent with the other applicable sections of ANILCA.

The state did enact within the specified time a law which meets the criteria. Therefore, the State of Alaska's fisheries and game boards set the bag limits, methods of take, the seasons of take and other factors related to the taking of fish and wildlife for



subsistence purposes in the monument. Insofar as state laws and regulations for the taking of fish and wildlife are consistent with the provisions of ANILCA and the applicable federal regulations, the state shall continue to regulate the subsistence harvests of fish and wildlife within the park units. Sections 13.47 and 13.48 of the regulations specify that, "to the extent consistent with the provisions of this chapter, applicable state laws and regulations governing the taking of fish and wildlife which are now or would hereafter be in effect are hereby incorporated by reference as a part of these regulations." The master memorandum of understanding between the National Park Service and Alaska Department of Fish and Game gives further clarification of jurisdictions for regulation and management of fish and wildlife in the park units (see Appendix B).

Sections 805 and 808 of ANILCA authorize the establishment of Subsistence Advisory Councils and Subsistence Resource Commissions, respectively. The Councils and the Cape Krusenstern Subsistence Resource Commission have been established and are executing their duties as defined by ANILCA. The regional subsistence advisory councils currently advise on subsistence matters on both federal and state lands. Sec. 808 directs the Cape Krusenstern Subsistence Resource Commission to devise and recommend to the Secretary of the Interior and the Governor of Alaska a program for subsistence hunting within the monument, and to make annual recommendations for any changes in the program as necessary. This section directs the Secretary of the Interior to promptly implement the program and recommendations submitted to him by each commission unless he finds in writing that such programs or recommendations violate recognized principles of wildlife conservation, threaten the conservation of healthy populations of wildlife, are contrary to the purposes for which the monument was established, or are inadequate in dealing with the subsistence needs of local residents.

Section 810 of ANILCA requires the heads of federal agencies to evaluate the effects upon subsistence uses of any proposed land withdrawal, reservation, lease, occupancy, use or other disposition of federal lands. These evaluations will be conducted by the National Park Service for all such actions. A Section 810 evaluation for this plan is contained in Appendix C.

The Park Service proposes to prepare a Subsistence Management Plan for the monument which would provide additional clarification in the management of subsistence uses. This management plan would be

developed in cooperation with all affected parties and the appropriate Subsistence Advisory Councils and the Cape Krusenstern Subsistence Resource Commission. The plan would be available for public review and comment prior to it becoming an approved plan. The approved subsistence hunting program and recommendations of the Cape Krusenstern Subsistence Resource Commission would be incorporated into the subsistence management plan.

The following items are proposed elements of the subsistence management plan:

A. Timber. Section 13.49 of the interim regulations governs the use of timber for subsistence purposes within the park units. As specified in these regulations, cutting of live, standing timber with a diameter greater than three inches requires a permit. Cutting of live, standing timber of less than three inches in diameter, and cutting of dead and down timber require no permit. Currently the National Park Service is requiring that all timber cut within the park units in Northwestern Alaska be used respectively within those units. This policy would be continued at least until the Cooperative Timber Management Plan for northwestern Alaska is completed.

B. Resident Zones. The National Park Service would, in accordance with Sec. 13.43 of the regulations, periodically carry out surveys of the resident zone communities to determine if significant changes have occurred in the make-up and character of the communities. The Park Service would consult with the Subsistence Advisory Councils, Subsistence Resource Commissions, and other interested publics prior to and during such surveys. Resident zone communities which do not meet the criteria contained in ANILCA and the regulations would be deleted from resident zone status, following completion of the proper regulatory procedures. Individuals within these communities who have customarily and traditionally (as defined in Title 5, Chapter 99 of the Alaska Administrative Code) engaged in subsistence uses within the monument would be issued subsistence permits and allowed to continue to engage in subsistence activities.

C. Subsistence Shelters and Cabins. When reviewing an application for a subsistence shelter permit, the National Park Service would consider the use for which the structure is desired; the subsistence use history of the applicant, including the applicant's use of such shelters; the local patterns of subsistence use as they relate to shelters; the potential impacts on other subsistence users and on natural and cultural resources; and alternative means of reasonably accommodating the

subsistence needs of the applicant. Other considerations must include the purposes for which the monument was established. The current proposed regulations may give further definition or may modify the above criteria.

D. Subsistence Trapping. In order to gather necessary data and to measure impacts on the resources of the monument, a trapping monitoring program would be instituted. This program would build upon past efforts to identify trapping areas and persons engaged in this activity. The program would address trapping methods, harvest levels, the role of trapping in the local economy, the cultural implications of trapping, and other pertinent topics. The information acquired would be used to develop guidelines for the management of subsistence trapping within the park unit, as necessary. If it is determined that park resources are being harvested and sold for purposes that exceed basic subsistence requirements, or that the health of the resource is threatened; the National Park Service would work directly with the Subsistence Resource Commission, the Subsistence Advisory Councils, and other interested persons in devising means of protecting monument resources and preventing activities that exceed the intent of Congress.

E. Access. Routes and new modes of access for subsistence must be analysed in terms of potential for impacts on the resources of the monument (vegetation, wildlife, soils, etc.) and upon other uses of the area. New modes of access that originate from technological advances may be permissible in the monument for subsistence purposes if they do not create unacceptable impacts upon the resources and uses of the monument.

F. Cape Krusenstern Subsistence Resource Commission. The Park Service would offer all possible assistance to the Subsistence Resource Commission. When a subsistence program is recommended by the Commission and accepted by the Secretary of the Interior, it would be incorporated in the subsistence management plan.

Although the Subsistence Resource Commission's primary responsibility is to formulate a subsistence hunting program, the National Park Service would consult with this body, whenever possible, on all substantive matters relating to subsistence uses.

G. Section 810 of ANILCA. The Park Service would, as required by Sec. 810 of ANILCA, evaluate all management actions in terms of their potential impacts upon subsistence activities.

## Recreation Use

Recreation use by visitors from out of the region is very low, approximately fifty persons per year. Use over the next ten years is likely to remain low with only small increases in the number of these visitors using the monument because of limited interest and because transportation costs to the region are relatively high, even within Alaska. Air transportation is the only logical option available to these visitors, and costs are expected to remain high since the total number of passengers is and will continue to be limited by overnight lodging space and other available services in Kotzebue. Few to no services are available in the region's villages and little change is expected. Although an argument could be made that services and facilities could be increased, there are no local efforts now underway to do so.

Several other sections of this plan relate to proposals that affect recreation use in the monument. Most importantly, sections on information and interpretation, access, subsistence, visitor facilities and commercial visitor use all relate directly.

The National Park Service proposes that visitors will be afforded only the barest minimum of services while in the monument. In Kotzebue, they would be advised about the rigors of local weather, cautioned about bears, given suggestions that could help prevent human/bear conflicts, asked to respect private property, subsistence users and resources and encouraged to "leave only footprints and take only pictures."

Staffing levels in the monument would be influenced by recreational and subsistence uses. The other major factor affecting staff levels is the protection of the area's resources. The level of staffing proposed (see staffing, page 3-42) is consistent with the existing and projected low-use levels while providing adequate protection of the monument's resources.

## Carrying Capacity

Planning guidelines for the National Park Service require that the "carrying capacity" of the monument be addressed in the general management plan. This policy requires that the service "carefully plan and regulate the use of the parks so that park resources are perpetuated and maintained unimpaired for the enjoyment of future generations."

Because recreational visitor use is very low and scientific data about the ecosystem and its many



component parts are scarce, no "carrying capacity" is presently recommended. If the resources of the monument are being degraded, a carrying capacity study would be conducted, and if necessary, limitations on use levels or activities could be instituted in accordance with ANILCA.

### Management Zoning

Planning guidelines for the National Park Service require that "management zoning" for the monument be addressed in the general management plan. However, the National Park Service does not now recommend management zones. Until further studies produce more definitive knowledge of the resources in the monument, zones are considered premature.

### Waste Disposal

The basic policy for trash in the monument would continue to be "pack in, pack out." Visitors would be informed of the policy and asked to adhere to it.

The several hundred abandoned 55-gallon drums, a variety of waste metal and other litter near the former military landing site in the Igichuk Hills would be collected and removed. The National Park Service would request funds to cleanup the site from the Department of Defense, which annually provides funding for such cleanup operations.

Finally, the removal or discard of human waste from administrative sites and popular visitor use sites within the monument would be accomplished in compliance with applicable regulations of Alaska Department of Environmental Conservation and the Environmental Protection Agency.

### Pollution Control and Abatement

In addition to the pollution potentials discussed previously under the air and water quality sections, the National Park Service recognizes the potential for fuel and oil spills along the coastline of the monument. The sensitive nature of the resources and the difficulty of containing spills in shallow, wind-whipped waters and in ice, make oil and fuel spills of special concern. To minimize the danger to the resources within and adjacent to the monument, the National Park Service would work with other federal and state agencies in preparing for and responding to spills, should they occur.

## Closures and Openings

The superintendent of the monument has the authority to close and open areas to use as provided by CFR 36 section 13.30, parts a-h. This authority allows for three types of closures: emergency, temporary and permanent. No changes are proposed for these procedures. A brief description of them follows.

Both closures and openings can be for reasons of public health and safety, resources protection, protection of cultural and scientific values, subsistence uses, threatened or endangered species, and assurance that the activity or area is being managed in a manner compatible with the purposes for which the monument was established.

Emergency and temporary closures or restrictions can relate to any of the above and to the use of aircraft, snowmachines, motorboats or non-motorized surface transportation and to the taking of fish and wildlife. Either type of closure is accompanied by notice and hearings as prescribed in the regulations (CFR 36 13.30 (c)(f)). Emergency closures may not exceed thirty days, and they can not be extended.

Notices of permanent closure or restrictions and openings shall be published in the Federal Register with a minimum public comment period of sixty days. Additionally, for closures, it is required that public hearings be held in the area affected and other locations as appropriate.

## Public Use Research Recommendations

1. Commercial Services Study
2. Cooperative Study of 1979 Commercial Fishing Levels
3. Subsistence Management Plan

## FACILITIES (ALTERNATIVE 1)

### Existing Facilities in the Monument

#### Cabins

There is currently one dilapidated shelter cabin within the monument; no other habitable, unoccupied cabins are known to exist in the monument. The shelter cabin is maintained by NANA Search and Rescue Group and is located about four miles north of Krusenstern Lagoon. The NANA Search and Rescue Group has been authorized to build a new cabin in the same general vicinity to replace the existing structure. The new cabin would be allowed to remain under provisions of ANILCA, other

federal regulations and terms and conditions of the permit.

It is proposed that no new permits for shelter or public use cabins would be issued; however, the National Park Service could include shelter facilities as part of any reconstruction of the potentially historic mail run cabin near the mouth of the Tukrok River (if later recommended).

### Airstrips

There is one existing airstrip within the monument in the Kakagrak Hills (within the Igichak Hills). The airstrip is part of an abandoned military communications site. It is proposed that the airstrip be retained in its present condition (i.e., limited maintenance by hand tools only) to provide access to the central portion of the monument and the beach which is four miles to the west. It is further proposed that no new airstrips be built in the monument. (Additionally information about access can be found in the access section of this chapter.)

### Ranger Station

There is presently one temporary ranger station (wall tent) within the monument; it is about one mile west of the mouth of the Tukrok River. This location was selected on a trial basis and the station could be relocated. The existing structure is a wall tent which can easily be moved. As use patterns develop, a permanent location for ranger station(s) would be determined. The target area for a station in the southern end of the monument is between Cape Krusenstern and Sheshalik Spit. See "Proposed Facilities in the Monument" (page 3-37) for a discussion of new ranger station(s) and their locations.

### Communications

The automated radio repeater on Mt. Noak would stay in place and continue to operate. Although no other facilities are presently proposed, it could become necessary to relocate or establish new communications sites not now envisioned.

### Navigational Marker

The one existing navigational marker at Cape Krusenstern is maintained according to terms and conditions of a National Park Service permit. ANILCA Section 1310 guarantees reasonable access to and operation and maintenance of existing navigation aids. New facilities

can also be permitted under provisions of the same section. Should any additional facilities be proposed, they would be reviewed on a case-by-case basis.

#### Abandoned Military Site

The National Park Service would work cooperatively with the U.S. Army Corps of Engineers and the Department of Defense to clean up the abandoned military site located in the Kakagrak Hills in the central portion of the monument. The airstrip at this site would be retained, as explained in the section titled "airstrips."

#### PROPOSED FACILITIES IN THE MONUMENT (ALTERNATIVE 1)

##### Ranger Stations

This alternative proposes a maximum of two ranger stations in the monument. One would be located in the southern portion of the monument on or between Sheshalik Spit and the mouth of the Tukruk River. The other in the northern half and in proximity to the proposed Red Dog Mine developments near the coast would be constructed only if the Red Dog Mine proposal becomes a reality.

The southern ranger station would be located according to criteria which include access for aircraft and boat, proximity to use areas and cultural resources, sensitivity to subsistence use patterns, and local communities concerns. The final site, one which meets these criteria, has not yet been selected.

In summer 1984, the National Park Service established a southern ranger station at what could be the first of several test locations. The ranger station consisted of a wall tent about one mile west of the Tukruk River's outlet to Kotzebue Sound (the outlet of Krusenstern Lagoon). This site meets all of management's criteria and thus was chosen for the first summer's use. Overall, the site functioned adequately, although concern was raised over its nearness to a heavily used subsistence area. Additional sites may be tested, some for an entire summer season others for only part of a season. When the best location is determined, the National Park Service will then consult with the local community and appropriate regulatory agencies before establishing a permanent location for the ranger station.

The extent of future facilities at this site is envisioned to include a wall tent structure of about 200 square feet, like the one used in summer 1984, and a second structure of similar size and proportions which



would be utilized as a food cache and cooking facility. A similar two-structure facility has been successfully utilized in the management of the Noatak National Preserve in the summers of 1983 and 1984. When a site is permanently chosen, the wall tents would be converted to cabins using the existing foundations.

The site for a northern ranger station has not been selected at this time, but it would likely be located between Imik Lagoon and the unnamed lagoon five miles to the north. It would be located so that it has access to any road system constructed as a result of the Red Dog project. It would also be desirable to have potential for small aircraft access on naturally occurring landing areas. Facilities here are envisioned to include a permanent residence/office/garage structure(s) of 1,500-2,000 square feet. This ranger station would be built only if the proposed Red Dog Mine road is constructed.

In both situations ranger stations would be sited to avoid damage to cultural resources, stream confluences, important wildlife habitat, or any other resources.

Because the proposed ranger stations would be compatible with the purposes of the monument, they, according to ANILCA Section 1306(a)(1), could be located within the monument. Should locations within the monument later prove unsuitable, the National Park Service, in accordance with Section 1306(a)(2) of ANILCA, would then give preference for new locations on lands of NANA and KIC.

#### Visitor Facilities

No new visitor facilities are proposed for the monument. It is realized that if the proposed ranger station(s) are constructed, visitors would gravitate toward them, particularly when in need of assistance or information.

#### Temporary Management/Research Facilities

The National Park Service anticipates and recognizes the necessity and importance of providing for support of National Park Service, other federal, state, and local agencies and research staffs within the monument. As early as 1982, the National Park Service expressed its support for this need by including a provision for temporary facilities in the Alaska Department of Fish and Game/National Park Service Master Memorandum of Understanding (see appendix B).

Consistent with that memorandum of understanding, the National Park Service proposes to continue to allow

temporary facilities for both management and research projects. However, permits must be obtained from the superintendent before any projects may be undertaken. The National Park Service proposes that annual blanket permits may simplify this procedure for agencies. The procedure for application and the granting or denying of requests for permits are found in 36 CFR Section 13.31.

#### Future Transportation Corridors

The Land Protection Plan (Chapter 4) favors a land exchange between the National Park Service and NANA. This exchange would involve a mixture of coastal and upland lands that, if exchanged, would help consolidate land ownership patterns and enable both land owners to more effectively and efficiently manage the resources upon those lands. Should the exchange occur, NANA, in a joint venture with Cominco Ltd., is expected to construct a road from the mine site to the coast, approximately 57 miles in length. As presently planned, portions of the industrial road and many of its ancillary facilities would be located within the monument. The official boundaries of the monument would not change as a result of the exchange.

The National Park Service would actively encourage any future proposals, or past proposals, like those presented in the Western and Arctic Alaska Transportation Study of 1981, to either avoid the monument totally, or to, as appropriate, utilize the Red Dog road.

When and if ANILCA Title XI applications are received, such as the one filed by NANA and Cominco Ltd., they will be processed according to the provisions mandated in ANILCA Title XI.

#### EXISTING AND PROPOSED FACILITIES IN KOTZEBUE (ALTERNATIVE 1)

Presently the National Park Service headquarters in Kotzebue services the monument, Kobuk Valley National Park and Noatak National Preserve. Facilities include administrative offices, a visitor contact and information/display area, and storage and maintenance space for aircraft and boats. This proposal recommends expanding space for each of these functions and sharing facilities with the Fish & Wildlife Service and possibly other federal agencies such as BLM. Facilities would be accessible to the handicapped to the extent practical.

Additionally, ANILCA Section 1306 directs the National Park Service "to the extent practical and desirable" to locate facilities on Native lands. In 1984 the

superintendent of the monument inquired of both NANA and KIC whether they might have lands suitable for various management facilities, particularly lots suitable for the residential fourplexes. The National Park Service before closing any transaction with another party would again ask NANA and KIC about their interests in the sale or lease of suitable properties.

Administrative Offices. This alternative proposes administrative offices that would accommodate up to thirteen permanent employees rather than the six currently employed. In addition, there would be space for several seasonal employees, a small conference room, library, laboratory and small storage space. It is estimated that the administrative offices would have a floor space of about 3,000 square feet in contrast to 1,500 square feet presently rented from NANA.

#### Public Use Facilities

The primary sources of information and interpretation about the three park units in Northwest Alaska would be located in a National Park Service visitor center in Kotzebue. The expanded visitor center would be designed and operated to serve the public interested in the park, preserve, and monument in Northwest Alaska, and would be used to convey information about the resources and uses of these park units. The visitor center public use section would accommodate up to 50 people. It would have an information desk, space for small exhibits about each of the three park units in Northwest Alaska, space for at least three or four topical exhibits, a small audiovisual room for slide shows and movies with a capacity for 30 people, and space for the sale of books, other printed material, and local crafts of the region. Some space would also be provided for the display of printed materials by other land managing agencies in Northwest Alaska. In total the area would increase from the 200 square feet now used to approximately 1,500 square feet.

The visitor center would also contain space for a work area and storage of interpretive exhibits, slide and movie files, books and other items essential to the operation of the visitor center. The visitor center could be located in a larger structure that contained other National Park Service or other agency functions.

The facilities would be staffed during the summer with seasonal employees. Requests for information during the winter would be handled by administrative personnel.

## Cooperative Museum

At present there is no facility in Northwest Alaska where federal, state, or local agencies can adequately store and exhibit cultural artifacts. The National Park Service would work with other interested parties to cooperatively fund and operate a museum in Kotzebue, which could house and exhibit artifacts and specimens from the park units and other lands in Northwest Alaska. Other organizations that may be interested in participating in the construction and operation of a museum include the Alaska State Museum, the University of Alaska Museum, the U.S. Fish and Wildlife Service, NANA, KIC, the Alaska Department of Fish and Game, and the City of Kotzebue. A single organization would likely be designated the lead in the planning and operation of the museum.

The primary objective of the museum would be to illustrate the cultural and natural history of Northwest Alaska, including the resources of the National Park Service units in the region, for the benefit of residents and visitors to Kotzebue. Traveling exhibits would be a possible feature of this museum, with exhibits going to the region's villages and other locations inside and outside Alaska.

Consideration would be given to combining the National Park Service visitor center and museum in a single building. This could serve to consolidate some facilities and would result in lower construction, maintenance, and operational costs. Museum collections and exhibits would be maintained to meet National Park Service museum standards.

Storage and Shop Space. The National Park Service would continue to lease or purchase and construct space for equipment storage (including boats) and shop equipment. Approximately 6,000 square feet is and would continue to be required.

Aircraft Hanger. Operations involve regular and extensive aircraft use because the three areas in the Northwest are large and extend far from the headquarters in Kotzebue; no road system or practical waterway system serves any of the areas. The National Park Service would construct or lease a heated aircraft facility of approximately 3,000 square feet. This facility would have approximately 3,000 square feet of floor space with a loft, a float plane dock with ramp, and a paved tie-down area of 4,000 square feet. It would have the capacity of housing three aircraft. Agreements might be made to share the facility with the U.S. Fish and



Wildlife Service and the Alaska Department of Public Safety.

The facility would afford better protection and maintenance for the aircraft in contrast to the current, rental outdoor tie-down space. In addition, a hangar would make it possible for personnel to ready aircraft on short notice in response to emergencies, NANA Search and Rescue Group callouts, and particularly during periods of extreme cold weather.

Government Housing. Currently one 5,000 square foot fourplex is scheduled for construction in summer 1986. Another of the same size is proposed for 1988 to meet the anticipated housing demand. Both fourplexes should be located in the community, rather than adjacent to an existing or proposed National Park Service complex or administrative compound.

The fourplex units would be occupied by a mixture of wage grade permanent staff, seasonal staff, newly relocated staff (for limited time only) and temporarily assigned staff. The government housing, as proposed, would be economical and convenient for seasonal employees and National Park Service personnel on temporary duty who often find it difficult to get overnight accommodations during the summer season in Kotzebue. These combined factors would hopefully provide a greater degree of staff continuity which the Kotzebue administrative office has had difficulty in achieving in the past.

#### ADMINISTRATION OF THE MONUMENT (ALTERNATIVE 1)

##### Staffing

The three National Park Service units in Northwest Alaska would continue to be under the supervision of a single superintendent in Kotzebue. Most of the permanent staff of these units would also continue to be stationed in Kotzebue. Pooling staff in Kotzebue, the regional center, would continue for the purposes of efficiency of management. Managers and specialists would be able to divide their time between the three areas while sharing offices space and all support services. It is additionally proposed that a new district ranger be assigned to Cape Krusenstern, one to Kobuk Valley National Park, and another to Noatak National Preserve, so that one person is knowledgeable about and responsible for each area. The total staff would consist of the following:

<u>Permanent Staff:</u>	<u>Existing Positions</u>	<u>Proposed Positions</u>
Superintendent	X	
Chief Ranger	X	
District Ranger (Cape Krusenstern)		X
District Ranger (Kobuk)		X
District Ranger (Noatak)		X
Headquarters Ranger	X	
Maintenance Worker		X
Biologist		X
Resource Management Specialist	X	
Cultural Resource Specialist		X
Interpretive Specialist		X
Administrative Technician	X	
Receptionist*	X	

#### Less Than Full Time

Park Rangers	8 per season
Biological Technicians	5 per season
Resource Technicians*	10 per season

\*Currently filled by local hire

Of this total staff, one district ranger, two park rangers and two resource technicians would be assigned to work exclusively within the monument.

Local Hire. It would be the continued goal of the National Park Service to carry out ANILCA section 1308 (local hire) and hire at least half of the seasonal staff from Northwest Alaska as it did in 1984, and to advance these employees into permanent staff positions as they obtained the necessary experience. A cooperative education program would continue to be used to provide local residents with necessary training with the cooperation of NANA and Chukchi Community College. However, efforts would be needed to make the additional program more effective. The National Park Service further recognizes that both the relative low pay, when compared with other wage jobs in the region, and the lack of community motivation for local permanent employment with the National Park Service have in the past four years contributed to a very low return rate for local hires. The National Park Service openly solicits suggestions from readers of this draft plan as to how the situation might be improved.

### Search and Rescue

The National Park Service proposes to continue initiating search and rescue operations within the boundaries when it believes that human life is in danger.

Additionally, the National Park Service proposes to remain an active member of the NANA Search and Rescue Group and the local Civil Air Patrol Squadron which coordinates search and rescue efforts in the region.

### Naming of Natural Features

Numerous natural features within the monument are currently unnamed on U.S. Geological Survey topographic maps. These include local features like rivers and creeks, lagoons, mountain peaks, hills, valleys, and spits.

The National Park Service in an attempt to maintain the natural and wild character of the monument would normally discourage additional new names of unnamed features. However, should the National Park Service learn that some or many of these features have local names and are of cultural significance, it would recommend to the federal Board of Geographic Names that these traditional names be used when naming features on updated U.S. Geological Survey topographic maps. Meantime, when the National Park Service produces maps, it will use traditional names for features without official names and the existing official names in accord with maps of the U.S. Geological Survey. In the future, the superintendent could utilize the services of local employees to research and develop updated base maps.

### Boundary Marking

The National Park Service proposes to mark boundaries along heavily used access routes. Materials and the form of the markers would be consistent with existing local custom.

### Cooperative Agreements

The effective management and operation of many aspects of the monument depend on cooperation with other agencies and organizations. Already, cooperative agreements are in effect. They include:

1. The National Park Service and the Alaska Department of Fish and Game master memorandum of understanding focusing on fish and wildlife management (see appendix B).

2. The National Park Service and the Alaskan Air Command Rescue Coordination Center cooperative agreement regarding high altitude search and rescue.
3. The National Park Service and the Alaska State Troopers cooperative agreement for search and rescue work in Northwest Alaska.
4. The National Park Service and the NANA Search and Rescue group for use of communications equipment during search and rescue activities.
5. The National Park Service and the Selawik National Wildlife Refuge for shared shop and office facilities and use.
6. The Kobuk Planning Area Interagency Fire Management Plan involving BLM, USF&WS, Bureau of Indian Affairs, Alaska Departments of Natural Resources and Fish and Game, NANA, Arctic Slope Regional Corporation and Doyon Ltd. Corporation.
7. The National Park Service, NANA, and the Alaska Natural History Association agreement which provides for the sale of locally made Native handicrafts in the National Park Service Kotzebue visitor center.

The National Park Service would under this proposal develop and seek to carry out additional cooperative agreements to more effectively and efficiently administer the monument. These include:

1. An agreement on timber management that would include the resources in the monument, in Kobuk Valley National Park and in Noatak National Preserve. This would be in cooperation with NANA, BLM, KIC, the State of Alaska (various departments) and the USF&WS.
2. An agreement focusing on the development of a regional museum possibly jointly operated that would be a federal/state repository for materials of Northwest Alaska and possibly a branch of the Alaska State Museum. This would be in cooperation with the Alaska State Museum, University of Alaska Museum, NANA, KIC, the City of Kotzebue and other groups or agencies who wish to pursue the project.
3. Agreements with NANA, KIC and owners of conveyed Native allotments in regards to the management of culture resources and identified ANCSA 14(h)(1) cemetery and historic sites. Additional



recommendations on this subject are explained in the Land Protection Plan in Chapter 4.

4. A joint agreement for coordinated search and rescue activities between all members of the NANA Search and Rescue Group, the Alaska State Troopers, and the National Park Service.
5. An agreement on communications with U.S. Fish and Wildlife Service, Bureau of Land Management, and the National Park Service.

## STATUS QUO ALTERNATIVE (ALTERNATIVE 2)

Alternative two provides for a continuation of existing activities and practices. The staff would stay small, (six permanent and temporary staff) research on cultural and natural resources would be limited and most facility space would remain small and cramped. The monument's staff would continue to respond to requests in a limited way, as they do now. Although changes would occur over time, National Park Service actions would be reactive as opposed to pro-active. The National Park Service would continue to manage the land, its many and varied resources and subsistence with a limited information base and according to all federal and state laws and National Park Service policies, as applicable.

Alternative two is presented in a manner so that the reader might compare or contrast it with alternative one and thereby gain a clearer understanding of the similarities and differences between them.

## CULTURAL RESOURCES MANAGEMENT (ALTERNATIVE 2)

This alternative differs from alternative 1 by having fewer staff, fewer facilities and less funding with which to carry out its proposals. The cultural resources inventory would occur, but it may take place over a greater time span than in alternative 1. As a result base line data would not be in a comprehensive form until perhaps two or more years later. This delay would postpone implementation of the Land Protection Plan which is, in part, dependent upon results from the cultural resources inventory. The monitoring program would occur, but the frequency of monitoring would be reduced in comparison to alternative 1. The program to interpret and preserve evidence of prehistoric and historic native cultures is not proposed in this alternative because staff would not exist to carry out the work. Researching the mail cabin at the Tukrok River would occur. National Park Service personnel would periodically patrol the monument as work schedules for the Noatak National Preserve, Kobuk Valley National Park, and the monument allow (as is now the case). The National Park Service would continue to follow all appropriate federal and state laws and regulations as well as National Park Service policies.

In all, the National Park Service would continue to be in the position of dealing with situations as they occur. The National Park Service would be less able to establish an increased basis of knowledge upon which decision making could be based unless other institutions were to fill this void.

## NATURAL RESOURCE MANAGEMENT (ALTERNATIVE 2)

### Air Quality

Same as alternative 1

### Water Quality

Same as alternative 1

### Fish and Wildlife

This alternative differs from alternative 1 because it lacks proposed research to be initiated by the National Park Service. The National Park Service would strengthen enforcement of regulations through closer cooperation with the state, compile and analyze big game species harvest information, coordinate harvest ticket information, and would participate in caribou and moose habitat research. It would also recommend a closure for either sex Dall sheep hunting in the Igichuk Hills. The National Park Service would not initiate research on the importance of Cape Krusenstern and Sheshalik Spit to waterfowl migrations and nesting, for expanded fisheries research work in the region, a musk ox management plan, or a seal and marine mammal habitat study.

The National Park Service would continue to manage these resources, as it now does. Cooperation with other agencies would continue as would use of the NPS/ADF&G Master Memorandum of Understanding (see Appendix B) for the life of this plan.

### Vegetation

The National Park Service would continue utilizing existing policies and periodic patrols via aircraft and snow machine to manage forest use.

### Fire Management

A fire management plan allowing for fire prescriptions in the monument would not occur, but participation in the region interagency fire management group would continue.

### Paleontologic Resources

Same as alternative 1

### Navigable Waters, Submerged Lands and Tidelands

Same as alternative 1

### Water Rights

Under this alternative the National Park Service would continue to manage the monument's waters under existing legal authorities and would not seek reservation of in-stream flow via AS 46.15.030.

#### Research Needs (Natural Resources)

Although the list of proposed research in the Resource Management Plan would remain the same, the emphasis on accomplishing that research would be substantially reduced and delays would be expected. These would occur because staff, office space, equipment and overall funding would be substantially less than in alternative 1.

#### PUBLIC USE (ALTERNATIVE 2)

##### Carrying Capacity:

Same as alternative 1

##### Information and Interpretation

This alternative differs from alternative 1 in that the ability to provide information to visitors would be severely limited by lack of space and available staff.

##### Access

Same as alternative 1

##### Commercial Visitor Services

Under this alternative current and future entrepreneurs would continue to utilize a commercial use license. No commercial services study for the monument is proposed. Provisions of ANILCA Section 1307, a provision giving preference to Native Corporations and local residents of the monument, would not be carried out because no limits would be placed upon the number of commercial operators and therefore no preference could be given to a particular group.

##### Commercial Fishing

This alternative differs from alternative one by delaying initiation of the study to determine use levels as of 1979 because existing staff could be working on other tasks with higher priorities.

##### Recreation Use

Same as alternative 1

##### Subsistence Use

This is the same as alternative 1 except that the subsistence management plan would not be written because of staff shortages.

##### Waste Disposal

Same as alternative 1

##### Pollution Control Abatement

Same as alternative 1



Closures and Openings  
Same as alternative 1

Research Recommendations  
This alternative recommends no new research be initiated.

EXISTING FACILITIES IN THE MONUMENT (ALTERNATIVE 2)

Cabins  
This is the same as alternative 1 except that the reconstruction of the old mail cabin would not occur.

Airstrips  
Same as alternative 1

Ranger Station  
The ranger station would continue to be manned as staff and funding to operate them allow. During some years no staff might be present.

Communications  
Same as alternative 1

Navigational Markers  
Same as alternative 1

Abandoned Military Site  
Same as alternative 1

PROPOSED FACILITIES IN THE MONUMENT (ALTERNATIVE 2)

Ranger Stations  
This alternative differs from alternative 1 because limitations of staff and funds could make operations of the ranger station(s) impossible unless funds currently used for Noatak National Preserve and or Kobuk Valley National Park were utilized in the monument. Conceivably, no staff or equipment would be in the monument, as was the case from 1980-1983; or staff and equipment could be assigned to one or more sites, with rangers working part of the season in one National Park Service area and part in another. The northern ranger station would not be constructed because of the lack of funds and staff to man the operation.

Visitor Facilities  
No visitor facilities are proposed; ranger station(s) would be manned periodically, or throughout the season, when funds allowed.

Temporary Management/Research Facilities  
Same as alternative 1

Future Transportation Corridors  
Same as alternative 1

EXISTING AND PROPOSED FACILITIES IN KOTZEBUE  
(ALTERNATIVE 2)

Administrative Public Use Facilities, Cooperative Museum  
Offices, Shop and Storage Space, Aircraft Hanger,  
Government Housing

This alternative differs from alternative 1 because it does not recommend expanding office space, public use facilities or a joint museum. It proposes no change in aircraft facilities and no construction of government housing. Existing facilities or the equivalent would continue to be utilized.

ADMINISTRATION OF THE MONUMENT (ALTERNATIVE 2)

Staffing

This alternative differs from alternative 1 by recommending no new staff.

Local Hire

Same as alternative 1

Search and Rescue

Same as alternative 1.

Naming of Natural Features

This is the same as alternative 1 except that funds would not be available for periodically updating the list of Native names for mapping purposes.

Boundary Markers

Same as alternative 1.

Cooperative Agreements

This alternative differs from alternative 1 by recommending that the National Park Service not initiate new cooperative agreements. Staff would continue to participate in existing agreements and fulfill requirements as staff and funding allowed. Only as funds and time were available would the National Park Service participate in additional new agreements.

## COMPARISON OF ALTERNATIVES

<u>Alternative 1 (Preferred Alternative)</u>	<u>Alternative 2 (Status Quo)</u>	<u>ANILCA* (citation)</u>	<u>36CFR13** (citation)</u>	<u>Issues Addressed (Page 1-3)</u>
<u>CULTURAL RESOURCES</u>				
1. Conduct cultural resources inventory.	1. Same as alternative 1 although it may take longer to complete.	201(3)	--	1,3
2. Monitoring program.	2. Same as alternative 1 but frequency would be reduced.			
3. Land acquisition program.	3. Same as alternative 1 but it would take longer to implement.			
4. Cooperative agreements and other forms of land protection.	4. Same as alternative 1 but it would take longer to implement.			
5. Program to interpret and preserve evidence of prehistoric and historic native cultures.	5. Not proposed.			
6. Research and record mail cabin possible adaptive re-use.	6. Same as alternative 1.			
<u>NATURAL RESOURCES</u>				
<u>Air Quality</u> Begin air quality monitoring.	<u>Air Quality</u> Same as alternative 1.	--	--	2,3,5

<u>Alternative 1 (Preferred Alternative)</u>	<u>Alternative 2 (Status Quo)</u>	<u>ANILCA* (citation)</u>	<u>36CFR13** (citation)</u>	<u>Issues Addressed (Page 1-3)</u>
<u>Water Quality</u> Begin water quality monitoring.	<u>Water Quality</u> Same as alternative 1.	--	--	2,3,4
<u>Fish and Wildlife</u> 1. Continue to use National Park Service/Alaska Department of Fish and Game Master Memorandum of Understanding.	<u>Fish and Wildlife</u> 1. Same as alternative 1.	804	13.21	2,4,5,6,7
2. Strengthen enforcement of regulations through closer cooperation with the State of Alaska.	2. Same as alternative 1.			
3. Compilation and analysis of big game species harvest information.	3. Same as alternative 1.			
4. Coordinated harvest ticket information (cooperative).	4. Same as alternative 1.			
5. Threaten and endangered species cooperative survey.	5. Not proposed.			
6. Cape Krusenstern/Sheshalik Spit waterfowl cooperative study.	6. Not proposed.			
7. Caribou and moose habitat research cooperative study.	7. Same as alternative 1.			
8. Seal and marine mammal cooperative study.	8. Not proposed.			
9. Musk ox management plan (cooperative).	9. Not proposed.			
10. Recommend closure of either sex Dall sheep hunting in the Igichuk Hills.	10. Same as alternative 1.			



<u>Alternative 1 (Preferred Alternative)</u>	<u>Alternative 2 (Status Quo)</u>	<u>ANILCA* (citation)</u>	<u>36CFR13** (citation)</u>	<u>Issues Addressed (Page 1-3)</u>
11. Expand cooperative fisheries research.	11. Not proposed.			
<u>Vegetation Management</u>	<u>Vegetation Management</u>			
1. Continue existing management policies.	1. Same as alternative 1.	--	13.20	2,4
2. Initiate timber inventory and management plan (cooperative).	2. Same as alternative 1.			
<u>Fire Management</u>	<u>Fire Management</u>			
1. Continue as member of Kobuk Interagency Fire Plan Group.	1. Same as alternative 1.	--	--	1,2,3,6
2. Develop monument's Fire Management Plan.	2. Not proposed.			
<u>Paleontologic Resources</u>	<u>Paleontologic Resources</u>			
<u>National Park Service welcomes agencies and universities to apply for permits to initiate research.</u>	<u>Same as alternative 1.</u>	--	13.20(c)	4,6
<u>Navigable Waters, Submerged Lands and Tidelands</u>	<u>Navigable Waters, Submerged Lands and Tidelands</u>			
1. Continue to manage as federal lands until determination of navigability is completed.	1. Same as alternative 1.	--	--	4,5
2. Work cooperatively with state to avoid incompatible uses on these lands.	2. Same as alternative 1.			

<u>Alternative 1 (Preferred Alternative)</u>	<u>Alternative 2 (Status Quo)</u>	<u>ANILCA* (citation)</u>	<u>36CFR13** (citation)</u>	<u>Issued Addressed (Page 1-3)</u>
<u>Water Rights</u>	<u>Water Rights</u>	--	--	3,4
1. Continue to use existing statutory provisions.	1. Same as alternative 1			
2. File for reservation of instream flow in accordance with AS46.15.030.	2. Not proposed.			
<u>Research Recommendations</u> See page 3-17 for list.	<u>Research Recommendations</u> See page 3-17 for list.	--	--	2,4,5,6 7
<u>PUBLIC USE</u>	<u>PUBLIC USE</u>			
<u>Carrying Capacity</u> No carrying capacity recommended.	<u>Carrying Capacity</u> Same as alternative 1.	--	--	1,2,3,4, 5,6,7
<u>Management Zoning</u> None proposed.	<u>Management Zoning</u> Same as alternative 1.	--	--	1,2,3,4, 5,6,7
<u>Information and Interpretation</u>	<u>Information and Interpretation</u>	1318	--	1,2,3,4, 5,6,7
1. Minimal visitor services in the monument.	1. No, or minimal visitor services in the monument.			
2. Primary visitor information provided in Kotzebue.	2. Same as alternative 1 but less staff available to carry out the work.			
<u>Access</u>	<u>Access</u>	201 205 1100 and others	13.15 13.16 13.46	1,2,5,7
1. Follow existing laws and regulations.	1. Same as alternative 1.			
2. Close monument to pack animals (excluding dogs).	2. Close monument to pack animals (excluding dogs).			

<u>Alternative 1 (Preferred Alternative)</u>	<u>Alternative 2 (Status Quo)</u>	<u>ANILCA* (citation)</u>	<u>36CFR13** (citation)</u>	<u>Issues Addressed (Page 1-3)</u>
Commercial Visitor Services 1. Continue existing practices. 2. Within life of plan consider initiation of a commercial visitor use study.	Commercial Visitor Services 1. Continue existing practices. 2. Not proposed.	1306 1307	--	5, 6
Commercial Fishing 1. Continue existing practices. 2. Initiate cooperative study to determine 1979 use levels.	Commercial Fishing 1. Same as alternative 1. 2. Initiate cooperative study to determine 1979 use levels when staff and funding allow.	205	13.21	2, 4, 6
Recreation Use 1. Minimum protection to visitors in the monument. 2. Pass out basic safety information.	Recreation Use 1. Same as alternative 1. 2. Same as alternative 1.	--	--	1, 2, 3, 4, 5, 6, 7
Subsistence Use 1. Continue opportunities for subsistence uses. 2. No changes proposed for 36CFR13 3. Continue to work with Cape Krusenstern Subsistence Resource Commission and Subsistence Advisory Council(s). 4. Write subsistence management plan.	Subsistence Use 1. Same as alternative 1. 2. Same as alternative 1. 3. Same as alternative 1. 4. Not proposed.	Title VIII	13.40- 13.51	2, 4, 5, 6, 7

<u>Alternative 1 (Preferred Alternative)</u>	<u>Alternative 2 (Status Quo)</u>	<u>ANILCA* (citation)</u>	<u>36CFR13** (citation)</u>	<u>Issues Addressed (Page 1-3)</u>
<u>Waste Disposal</u> <u>Pack in, pack out policy.</u>	<u>Waste Disposal</u> <u>Same as alternative 1.</u>	--	--	2,4,5,6
<u>Pollution Control and Abatement</u> <u>Work cooperatively with other</u> <u>agencies.</u>	<u>Pollution Control and Abatement</u> <u>Same as alternative 1.</u>	--	--	2,4,5,6
<u>Closures and Openings</u> <u>Continuation of existing pro-</u> <u>cedures.</u>	<u>Closures and Openings</u> <u>Same as alternative 1.</u>	806 815 816	13.30	2,4,5,6 2,4,5,6
<u>Research Recommendations</u> 1. Commercial services study. 2. Subsistence Management Plan.	<u>Research Recommendations</u> 1. Not proposed. 2. Not proposed.	--	--	1,2,3,6, 6

#### EXISTING FACILITIES IN THE MONUMENT

##### Cabins

- Existing shelter cabin (permit) to remain valid and renewable.
  - No new shelter cabins to be authorized.
  - Potential re-construction of old mail cabin.
- Same as alternative 1.
  - Same as alternative 1.
  - Not proposed.

13.17  
1315  
1316

2,4,5,7

##### Airstrips

- Continue use of Igichuk Hills airstrip.
  - No new airstrip construction.
- Same as alternative 1.
  - Same as alternative 1.

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2,4,5,6,  
7



<u>Alternative 1 (Preferred Alternative)</u>	<u>Alternative 2 (Status Quo)</u>	<u>ANILCA* (citation)</u>	<u>36CFR13** (citation)</u>	<u>Issues Addressed (Page 1-3)</u>
<u>Ranger Station</u>	<u>Ranger Station</u>	--	--	1,2,3,4, 5,6,7
<u>Continue location(s) on a trial basis.</u>	<u>Same as alternative 1.</u>			
<u>Communications</u>	<u>Communications</u>			
<u>Mt. Noak repeater to remain.</u>	<u>Same as alternative 1.</u>			
<u>Navigationl Marker</u>	<u>Navigationl Marker</u>	1310	--	7
<u>Continue existing policies.</u>	<u>Same as alternative 1.</u>			
<u>Abandoned Military Site</u>	<u>Abandoned Military Site</u>	--	--	4,5,6
<u>Cleanup site through coopera- tive effort.</u>	<u>Same as alternative 1.</u>			

#### PROPOSED FACILITIES IN THE MONUMENT

<u>Ranger Station</u>	<u>Ranger Station</u>	--	--	1,2,3,4, 5,6,7
1. One seasonal ranger station in southern half of monu- ment.	1. One seasonal ranger station in southern half of monu- ment as staff and funding allow.			
2. One year-round ranger station with access to the proposed Red Dog Road (only if Red Dog Mine is developed).	2. No proposed action.			
<u>Visitor Facilities</u>	<u>Visitor Facilities</u>	--	--	1,2,3,4, 5,6
1. Ranger station(s) serve as visitor contact point.	1. Same as alternative 1.			
2. No new visitor facilities proposed.	2. Same as alternative 1.			

<u>Alternative 1 (Preferred Alternative)</u>	<u>Alternative 2 (Status Quo)</u>	<u>ANILCA* (citation)</u>	<u>36CFR13** (citation)</u>	<u>Issues Addressed (Page 1-3)</u>
<u>Temporary Management/Research Facilities</u> Continue to allow temporary facilities.	<u>Temporary Management/Research Facilities</u> Same as alternative 1.	--	--	1,2,3,4, 5,7
<u>Future Transportation Corridors</u> 1. Follow procedures in ANILCA Title XI. 2. Encourage applicants for Title XI permits to utilize one corridor.	<u>Future Transportation Corridors</u> 1. Same as alternative 1. 2. Same as alternative 1.	Title XI	--	2,3,4,5, 6,7
<u>EXISTING AND PROPOSED FACILITIES IN KOTZEBUE</u>				
<u>Administrative Offices</u> Expand from 1,500 to 3,000 square feet.	<u>Administrative Offices</u> Same as alternative 1.	1306	--	1,2,3,4, 5,6,7
<u>Public Use Facilities</u> Expand facilities from 200 square feet to 1,500 square feet.	<u>Public Use Facilities</u> Not proposed.	--	--	2,3,4,6
<u>Museum</u> Pursue joint Northwest museum.	<u>Museum</u> Not proposed.	--	--	2,3,4,6
<u>Storage and Shop Space</u> Continue to utilize 6,000 square feet.	<u>Storage and Shop Space</u> Same as alternative 1.	1306	--	1,2,3,4, 5,6,7

<u>Alternative 1 (Preferred Alternative)</u>	<u>Alternative 2 (Status Quo)</u>	<u>ANILCA* (citation)</u>	<u>36CFR13** (citation)</u>	<u>Issues Addressed (Page 1-3)</u>
Aircraft Hanger Establish facility of 3,000 square feet with a heated hanger.	Aircraft Hanger Continue to rent outdoor tie-down.	1306	--	1,2,3,4, 5,6,7
Government Housing Construct one 5,000 square foot four-plex.	Government Housing No additional housing proposed	1306	--	1,2,3,4, 5,6,7
<u>ADMINISTRATION OF THE MONUMENT</u>				
Staffing	Staffing	--	--	1,2,3,4, 5,6,7
1. Establish a unit manager position with cultural resource expertise.	1. Continue operations with six permanent and seasonal staff.			
2. Share staff with Noatak Preserve in Noatak.	2. Not proposed.			
3. Establish cultural resources position (shared among three Northwest National Park Service areas).	3. Not proposed.			
4. Share additional staff with other Northwest Areas so that entire Kotzebue office staff equals thirteen staff positions.	4. Same as alternative 1.			
Local Hire	Local Hire	1308	--	2,3,6
1. Follow ANILCA provisions.	1. Same as alternative 1.			
2. Continue goal of hiring 50% of all seasonal staff as local hires.	2. Same as alternative 1.			

<u>Alternative 1 (Preferred Alternative)</u>	<u>Alternative 2 (Status Quo)</u>	<u>ANILCA* (citation)</u>	<u>36CFR13** (citation)</u>	<u>Issues Addressed (Page 1-3)</u>
3. Improve return rate of local hires.	3. Same as alternative 1.			
4. Advance local hires into permanent positions.	4. Same as alternative 1.			
<u>Search and Rescue</u>	<u>Search and Rescue</u>	--	--	2,3,6
1. Initiate search and rescue when appropriate.	1. Same as alternative 1.			
2. Continue as member of NANA search and rescue group.	2. Same as alternative 1.			
<u>Naming of Natural Features</u>	<u>Naming of Natural Features</u>	--	--	2,3,4,6
1. Utilize existing U.S.G.S. place names.	1. Same as alternative 1.			
2. Discourage new additional naming of features.	2. Same as alternative 1.			
3. Use native and local names whenever updates are made.	3. Same as alternative 1.			
4. Update lists of native names periodically.	4. Not proposed.			
<u>Boundary Markers</u>	<u>Boundary Markers</u>	--	--	1,2,4,5,6
Use customary and traditional methods to mark heavily used access routes.	Same as alternative 1.			
<u>Cooperative Agreements</u>	<u>Cooperative Agreements</u>	--	--	1,2,3,4,5,6,7
Initiate new cooperative agreements. See page 3-44 for list.	Initiate new cooperative agreements as staff and funding allow.			

\*ANILCA is the abbreviation for the 1980 Alaska National Interest Lands Conservation Act.  
 \*\*36CFR13 is the Code of Federal Regulations volume 36, part 13.



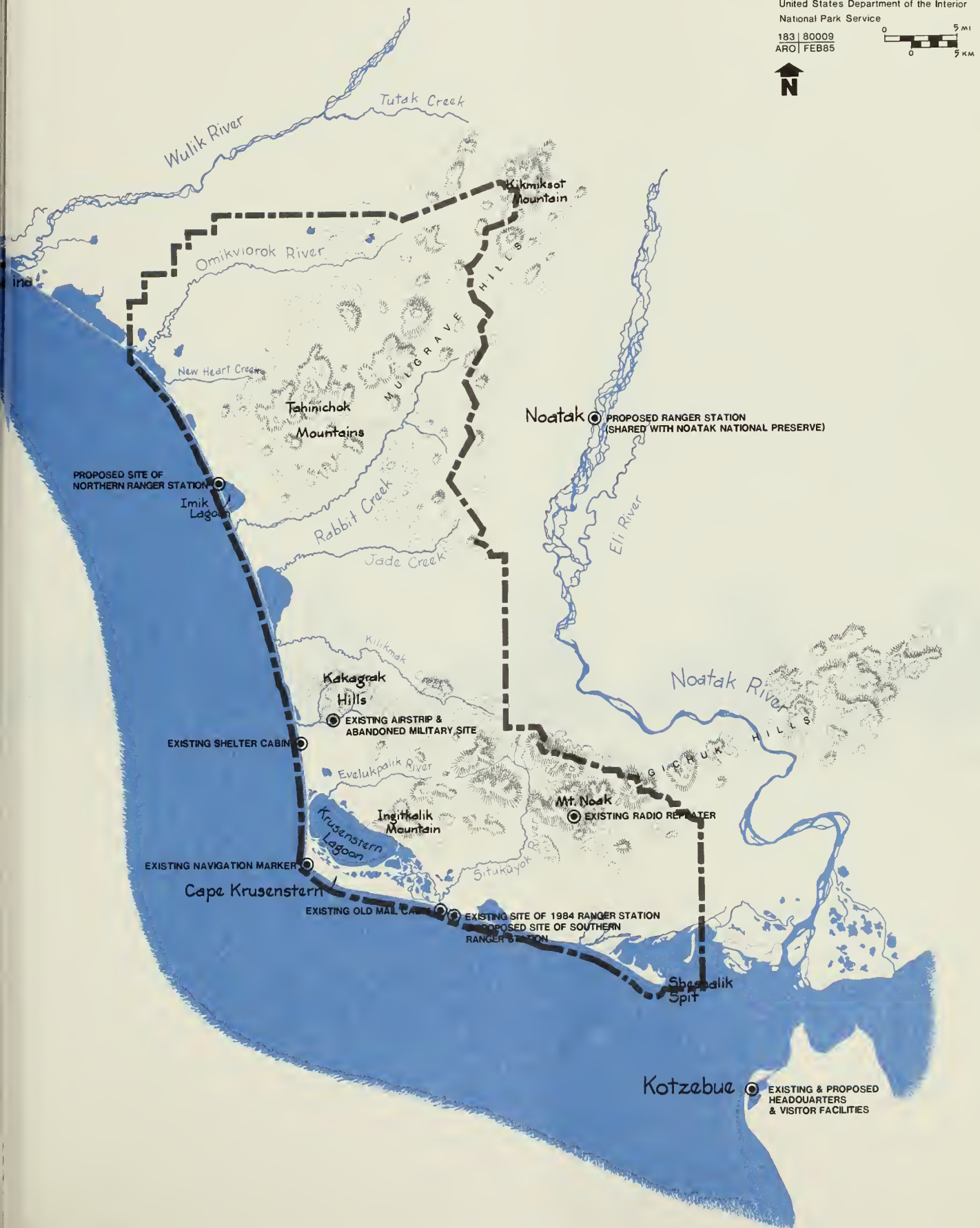


# EXISTING & PROPOSED FACILITIES

Cape Krusenstern  
National Monument

United States Department of the Interior  
National Park Service

183 | 80009  
ARO | FEB85







## LAND PROTECTION PLAN





CHAPTER 4  
LAND PROTECTION PLAN

INTRODUCTION

In May 1982 the Department of Interior issued a policy statement for use of the federal portion of the Land and Water Conservaton Fund for land acquisition. In response to that policy, this draft land protection plan has been prepared under the guiding principle of ensuring the protection of resources in Cape Krusenstern National Monument is consistent with the Alaska National Interest Lands Conservation Act (ANILCA), and other applicable laws, executive orders, regulations and policies. Specifically the plan was prepared to:

1. To determine what non-federal land or interest in non-federal lands inside the monument boundary need to be in public ownership, and what means of protection in addition to acquisition are available to achieve the monument's purpose as established by Congress.
2. To inform landowners about the intentions of the National Park Service to protect land either through purchase or other means.
3. To help managers identify priorities for making budget requests and allocating available funds to protect land and other resources.
4. To find opportunities to help protect unit resources through cooperative agreements with state or local governments, Native Corporations, interested groups or organizations, landowners and the private sector.

The major elements to be addressed by this section include: (1) the identification of non-federal lands within the monument's boundaries that need to be protected; (2) the minimum interest in those lands that the National Park Service must acquire to assure protection; (3) the recommended means of acquiring the land or interest in land; (4) priorities for protection to assure that available funds are used to protect the most important resources; (5) impacts of the land protection plan on local residents; (6) the amount, type and density of private use or development that can take place without harming monument resources; and, (7) external activities that have or may have effects on monument resources and land protection requirements.

This plan represents the first formal attempt to address land protection issues related to the monument. Because of continuing change in the status of much of the non-federal land and the potential Cape Krusenstern Land Exchange (related to the Red Dog Mine) the recommendations in this plan should be viewed as tentative and subject to revision in future land protection plans. In addition, more needs to be known about the cultural resources on non-federal lands within the monument. As more information is gathered and the significance of the resources is determined, the priorities may change to reflect this information.

The land protection plan does not constitute an offer to purchase land or interest in land nor does it diminish the rights of non-federal landowners. The plan is intended to guide the National Park Service in subsequent land protection activities subject to the availability of funds and other constraints and to inform the public about the National Park Service intentions.

In accordance with Section 910 of ANILCA, proposed actions of the land protection plan involving land exchanges with Native village and regional corporations are excluded from National Environmental Policy Act (NEPA) considerations. Proposed land exchanges and cooperative agreements with the NANA Regional Corporation and proposed relinquishment of selections by the NANA Regional Corporation therefore do not require NEPA compliance.

Other actions proposed in the land protection plan would cause no significant change in existing land or public use, and are therefore categorically excluded from NEPA considerations, in accordance with the U.S. Department of the Interior implementing procedures (516 DM6, Appendix 7.4 and 516 DM2, Appendix 2). Proposed actions for small tracts and submerged state lands are included in this category.

It should be noted that the appropriation of funds for land acquisition is expected to be very limited for the next five years. Therefore, the purchase of nonfederal lands in the monument during this period is expected to be minimal.

## SUMMARY

	<u>Acres</u>	<u>Percent of Monument</u>
1. Current Owner Federal (includes 181,428 acres of selections* by Native corporations and individuals)	622,751	94%
Non-Federal (Native corpora- tions and individuals)	37,056	6%
TOTAL	659,807	100%

\*Not all lands selected by Native corporations are expected to be conveyed since their selections have exceeded total acreage entitlements.

2. Acreage to be Protected (includes 181,428 acres of selections by Native corpora- tions and individuals)	218,484	33%
3. Proposed Methods of Protection		
a. Fee simple acquisition (exchange, donation, pur- chase or relinquishment)	113,418**	
b. Easements	11,918	
c. Cooperative agreement/ Alaska Land Bank	203,295**	

\*\*Includes lands to be conveyed in the proposed Cape Krusenstern Land Exchange.

4. Statutory Acreage Ceiling: There is no acreage ceiling for the monument. Twenty-three thousand acres may be added to or taken from the monument without Congressional approval. In addition, the Secretary may acquire private land or designate other Federal lands, not to exceed 7,500 acres, which contain significant archeological or paleontological resources closely related with the monument.

5. Funding Status

Authorized:	None
Appropriated:	None
Obligated:	None

6. Top Priorities: The top priorities consist primarily of Native allotments located between the outlet of Krusenstern Lagoon (Tukruk River) on the



south and Battle Rock on the north. The group includes the allotments located on Cape Krusenstern itself. The primary reason for creating the monument was to protect the known significant cultural resources of the beach ridges at the Cape. Some of the allotments are believed to lie atop known major cultural resources, while others are suspected to be located where there is a high probability of significant cultural resources.

## PURPOSE OF THE MONUMENT AND RESOURCES TO BE PROTECTED

### A. Significance

Cape Krusenstern National Monument was created primarily for the following reasons:

To protect and interpret a series of archeological sites depicting every known cultural period in arctic Alaska; to provide for scientific study of the process of human population of the area from the Asian continent; in cooperation with Native Alaskans, to preserve and interpret evidence of prehistoric and historic Native cultures; to protect habitat for seals and other marine mammals; to protect habitat for and populations of, birds and other wildlife, and fish resources; and to protect the viability of subsistence resources. Subsistence uses by local residents is to be permitted in the monument in accordance with the provisions of Title VIII.

Mandates for management of the monument are discussed further in Chapter 1 of the draft general management plan.

Because of the national and international significance of the prehistoric sites in the monument the entire area is included in the much larger Cape Krusenstern Archeological District, is on the National Register of Historic Places and is a National Historic Landmark. The monument has also been nominated to the World Heritage List of Cultural Parks and could be only the second U.S. National Park on the world list. Additionally, a portion of the monument (Cape Krusenstern and the Igichuk Hills) totalling some 209,360 acres has been identified as a potential National Natural Landmark in recognition of resource values (Department of the Interior, 1981).

### B. Resource Description

The monument has been recognized primarily for its archeological resources. The cape's bluffs and its

series of 114 beach ridges, the primary area of known cultural resources, show the changing shorelines of the Chuckchi Sea and contain a record in chronological order of an estimated 8,000 years of prehistoric and historic uses of Northwest Alaska's coastline. Other significant resources include habitat for a variety of birds, wildlife, and marine mammals.

Nesting by arctic peregrine falcons within the monument has been reported. Although the total extent of nesting is unclear, the area is not considered to be one of the more important peregrine nesting areas. No other threatened or endangered species are known to occur within the monument.

The monument's resources are more fully described and mapped in Chapter 2 "Affected Environment" of the draft general development plan.

### C. Legislative Authorities

ANILCA provides a general framework for land protection for the monument. The Secretary of the Interior is authorized to acquire (by purchase, donation, exchange or otherwise) any lands or interests in lands within the monument. However, any lands or interests in lands owned by the state and local governments or by Native village and regional corporations may be acquired only with the consent of the owners.

Native allotments or other small tracts may be acquired without consent but only after offering an exchange for other public lands with similar characteristics and like value if such lands are available and the owner chooses not to accept the exchange.

No improved property will be acquired without the consent of the owner unless an acquisition is necessary for the protection of resources or for protection of those monument values listed in ANILCA. When an owner of improved property consents to exchange lands or to sell to the United States, the owner may retain certain property rights including the right of use and occupancy for noncommercial residential and recreational use by agreement with the National Park Service.

Section 1302(i)(1) and (2) of ANILCA authorizes the Secretary of the Interior to acquire by donation or exchange, state-owned or validly selected lands that are contiguous to the monument. Any lands acquired under this authority will become part of the monument without reference to the 23,000 acre restriction included in minor boundary adjustments as defined in section 103(b).

Section 1304 authorizes the Secretary to designate other federal lands or acquire with consent of the owner, lands which contain significant archeological or paleontological resources closely related to the monument. Such actions may not exceed 7,500 acres.

Section 205 protects valid commercial fishing rights or privileges within the monument. The Secretary may take no action to restrict unreasonably these rights and privileges including the use of public lands for campsites, cabins, motorized vehicles, and aircraft landings on existing airstrips except where the Secretary finds a significant expansion of the use of monument lands beyond the level of such use during 1979.

In addition to complying with the these legislative and administrative requirements, the National Park Service is required to administer the area as a unit of the National Park System pursuant to the provisions of the Act of August 25, 1916 (39 Stat. 535, National Park Service Organic Act) as amended and supplemented, and in accordance with the provisions of Title 16 of the United States Code, Title 36 of the Code of Federal Regulations, and other applicable law. The National Park Service has proprietary jurisdiction over federally owned lands in the monument.

State, native, and other private lands within the boundaries are not subject to regulations applicable solely to federal lands. If later conveyed to the federal government, these lands will become part of the monument and then be subject to those regulations.

#### D. Resource Management and Visitor Use Objectives

Objectives for management of the monument are fully listed in Appendix E of the draft general management plan. Major objectives include identification, evaluation, and protection of cultural resources; management of natural resources to perpetuate biological processes and systems; providing for better understanding and appreciation of the area; and traditional uses including subsistence, of the area consistent with the foregoing values.

#### LAND OWNERSHIP AND USES

The majority of the monument is already in federal ownership; however, up to 30 percent of the lands could become private as a result of existing land selections. Most of the monument is used primarily for subsistence activities. Uses of the monument are described in Chapter 2 "Affected Environment" of the draft general management plan.

In various portions of the monument (see Land Status map page 4-11), the Native village corporations of Kotzebue, Kivalina, and Noatak have selected 182,942 acres.\* In addition, NANA Corporation has selected 106,269 acres within the boundaries of the monument. Some 96,000 acres of the same land have been selected by both NANA Regional Corporation and the village corporations. Not all of the acreage selected by the various Native corporations is expected to be conveyed because the corporations were allowed to exceed their entitlement when making the original selections. NANA has also applied for 16 historical places and cemetery sites throughout the monument. All of these selections are pursuant to the Alaska Native Claims Settlement Act of 1971 and have been applied for on the basis that these sites contain Native cemeteries or sites of historic value. Lastly, applications for 32 Native allotments comprising 3,491 acres are pending adjudication; 52 allotments comprising 6,378 acres have been approved or certificated.

The following chart presents land ownership acreages and land status with the monument.

Land Status  
Cape Krusenstern National Monument

<u>Federal Lands</u>	<u>Acres</u>	<u>Acres</u>
Federal lands with no encumbrances		441,323
Federal lands with encumbrances		
Lands under regional corporation applications	95,645	
Lands under village corporation applications	172,983	
Lands under 14(h)(1) applications	5,589	
Lands under Native allotment applications	3,491	
	<u>277,708</u>	
Less overlapping applications	<u>-96,280</u>	
Total federal lands with encumbrances		<u>181,428</u>
Total federal Lands		622,751

\*The village corporations of Kivalina and Noatak, but not Kotzebue, along with all others in the region have consolidated with NANA into one corporation. For the discussion of land status throughout this plan each village, as appropriate, will be listed because original and continuing records record facts in this way.



## Non-Federal Lands

Native regional corporation (patent and interim conveyance)	10,624
Native village corporation (patent and interim conveyance)	9,959
Native allotments (approved and certificated)	6,378
Navigable waters	<u>10,095</u>
Total non-federal lands	<u>37,056</u>
GROSS ACREAGE	659,807

The majority of Native allotments are concentrated along the coastline (see Land Status Map page 4-11). They are used predominately as base camps for subsistence activities. These uses are expected to continue and to slowly increase. For a more detailed description of these uses see Chapter 2 "Affected Environment" of the draft general management plan.

### Compatibility of Land Uses

The National Park Service utilizes legislation establishing the monument, the organic act that established National Park Service and National Park Service policies as criteria when determining uses that are compatible with the monument's purpose and management. Many current or potential uses of non-federal land are compatible with the purposes and values of the monument. Compatible uses include the following:

1. Use of lands for residential, recreational, or subsistence activities that do not adversely impact wildlife or other values on adjacent federal lands.
2. Repair, replacement, or minor modification of existing structures, whose appearance blends with the undeveloped character of adjacent federal lands.
3. Limited construction of new structures whose appearance blends with the undeveloped character of adjacent federal lands.
4. Commercial fishing activities which do not constitute a significant expansion of the use of monument lands beyond the level of use during 1979.

Some uses of non-federal land that would be incompatible with the cultural, ecological, and recreational values of the monument include the following:

## LAND STATUS

### Cape Krusenstern National Monument

United States Department of the Interior  
National Park Service

183 | 80004  
ARO | DEC84



- SMALL TRACT ENTRIES
- CEMETERY SITES & HISTORIC PLACES
- OVERLAPPING SMALL TRACTS & HISTORIC PLACES
- NATIVE REGIONAL CORPORATION - APPLICATION
- NATIVE VILLAGE CORPORATION - APPLICATION
- NATIVE REGIONAL CORPORATION - PATENT & IC'D
- NATIVE VILLAGE CORPORATION - PATENT & IC'D
- OVERLAPPING APPLICATIONS REGIONAL/VILLAGE





1. Activities that damage or contribute to damage of archeological or historical resources (e.g., increased recreational use, artifact collection).
2. Activities that result in water pollution, sedimentation, or other impairment of fish spawning, rearing, feeding and overwintering habitat, or other surface or ground waters (e.g., logging, mining, waste disposal).
3. Construction of roads, airstrips, and other surface disturbances that disrupt drainage patterns, accelerate erosion, and increase runoff and sediment loads or which unduely change the visual character of the monument.
4. Activities that impair wildlife's use of habitat on adjacent federal lands (e.g., substantial population increase, habitat manipulations affecting distribution of wildlife).
5. Hunting or trapping that impairs the natural condition of wildlife populations on adjacent federal lands.
6. Disposal of refuse in a manner that attracts bears, pollutes water resources, or otherwise impairs public health and safety.
7. Blocking public access when and where no other viable options for public access occur (e.g., no easements to key beach areas or other features).
8. Major new commercial development.

#### External Conditions Affecting Land Protection

Section 1301(b)(8) of ANILCA requires the general management plan to consider the relationship between the management of the monument and activities being carried out in, or proposed for surrounding areas. Many activities and several plans may affect land use and or protection of resources within the monument. The lands surrounding the monument are available for a variety of uses. They are described in Chapter 1 of the draft general management plan. A discussion of activities that may occur on them follows.

The Red Dog mine site, located some 25 miles northeast of the monument, has proven economic quantities of lead and zinc. There is considerable interest on the part of the State of Alaska and NANA to develop the mine. NANA, and its partner Cominco Ltd. are simultaneously pursuing both a land exchange and a Title XI right-of-way for construction of 25 miles of road, an ore storage facility, and a port site on lands presently in the monument. Under the Title XI right-of-way provision of ANILCA the road and other facilities would be located on federal lands. The National Park Service would have management responsibility for administering the right-of-way and the adjoining lands. An environmental



impact statement on the Title XI right-of-way application was completed in October 1984. In a land exchange, the road and other facilities would be located on private lands within the monument boundaries. The National Park Service favors the land exchange proposal. In addition to locating the facilities on private lands, the land exchange would consolidate private ownership within the monument and transfer the headwaters of several drainages in the northern half of the monument into federal ownership. Consolidation of lands would make management easier for both the National Park Service and NANA. In addition, acquisition of the headwaters would help protect wildlife habitat, water quality, and subsistence resources. The proposed land exchange would not affect the areas containing known cultural resources for which the monument was created to protect. A resource evaluation on the proposed exchange was prepared in August 1984.

The zinc and lead deposits may eventually support a mining operation employing up to 400 people. Some of these workers may use the monument for subsistence and or recreation since at least half of the employees are to be hired from the region, but increased use from this group is expected to be small.

The Ambler/Bornite mining districts in the Kobuk River drainage may result in the influx of additional people and a new transportation corridor into the region in the future although present activity in the district is very limited. In cases such as these the National Park Service would offer to work with the developers to mitigate any adverse impacts that these activities and/or their secondary effects would have on monument resources.

The NANA Regional Strategy (revised 1984) is a 10-year plan for the overall development of NANA lands. The strategy stresses the subsistence-based culture, improvement of the standard of living for NANA stockholders, strengthening the spirit and pride of the Inupiat people, and developing local management capability and local control. Numerous opportunities to do this are identified such as the Noatak salmon hatchery; secondary service businesses to mineral companies; local processing of resources; management of growth and development to minimize impacts; and developing training programs which blend traditional values and modern management techniques. The National Park Service is a member of the NANA Regional Strategy Lands Task Force and intends to continue to work closely with NANA and other agencies and groups in the preparation and implementation of their respective land management plans.

The draft NANA Region Coastal Zone Management Plan is another regional plan that provides "....for the balanced protection of natural systems and cultural values" (NANA Region Coastal Management Plan, 1982). The draft plan identifies several key geographical areas of biological, cultural and industrial importance in or near the monument. The National Park Service has provided technical information and testimony in the preparation of the NANA Coastal Zone Management Plan and intends to comply with it to the degree possible in managing the monument consistent with federal law.

Proposed off-shore oil and gas leases by the State of Alaska and the Minerals Management Service include the following tracts and areas: State of Alaska - Icy Cape #53, September, 1987; Hope Basin #45, May 1989 and Offshore Icy Cape #58, September 1989; MMS, OCS - Barrow Arch #85, February, 1985 and #109, February 1987. Except for the Squirrel River corridor the BLM managed lands in the region are open to oil and gas leases as well as mineral entry.

The Western Arctic Alaska and Transportation Study identified three utility corridors along the Kobuk River between the Ambler mining district and Cape Krusenstern that could affect the monument. These are discussed in the future transportation corridors section on pages 3-39 in the draft general management plan and identified on the External Influences map (see page 4-17). There are no plans at present to develop any of these corridors. Should a corridor be formally proposed, the National Park Service would work closely with the applicant, and encourage utilization of the proposed Red Dog Road if applicable, as well as follow the procedural requirements of Title XI of ANILCA.

In 1985 the State of Alaska is preparing to start a comprehensive land use plan for state lands in Northwest Alaska. The plan will identify state land and waters suitable for resource development, settlement, and resource conservation. The National Park Service intends to work closely with the state in the preparation of its plan especially for those lands adjacent to the monument.

Other external influences include the conservation system units surrounding the monument. These include Kobuk Valley National Park, Selawik National Wildlife Refuge, and Noatak National Preserve (see External Influences map page 4-17).

## Past Acquisition Activities and Current Protection Program

Cape Krusenstern National Monument was established in 1978; no additional interests in land have been acquired by the National Park Service since that time. There have been no funds authorized for acquisitions. This plan is the first to prioritize a land protection program for the monument.

## Kikiktagruk Inupiat Corporation Proposed Land Exchange

KIC has proposed to exchange two sections of land, 1,280 acres, from within the Bering Land Bridge National Preserve for an equal area of land within the monument near Sheshalik Spit. The present KIC lands in Bering Land Bridge are undeveloped. This is the site of an unsuccessful oil well exploration in 1978. The lands proposed for exchange in the monument are on the coastline between Aukuluk and Krusenstern lagoons and lie between Native allotments in the area. The National Park Service will continue to discuss the proposal for a land exchange with KIC to see if a mutually agreeable exchange can be developed.

## Sociocultural Characteristics

About 30 percent of the monument is or has been selected for private ownership by Native residents or corporations of Northwest Alaska. Most of this private land is village (Noatak, Kivalina and Kotzebue) and regional corporation (NANA) selections in the northwest, east and southeast portions of the monument with native allotments scattered mostly along the coastline. There are at least two year-round residents of the monument. Most corporation shareholders or allottees reside in Noatak, Kivalina or Kotzebue and use the land area intermittently for subsistence depending upon availability of the different plant and animal species. There are no known plans for changes in the subsistence use of these lands. Subsistence activities are discussed further in Chapter 2 and 3 of the draft general management plan and in Appendix C.

NANA Corporation is seeking to develop the Red Dog Mine in order to provide a broader economic base for the region.

## PROTECTION ALTERNATIVES

The following five alternatives offer varying degrees of protection to the cultural and natural environment of the monument's non-federal and adjoining federal lands. Each alternative is analyzed with respect to its,

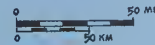


## EXTERNAL INFLUENCES

Cape Krusenstern  
National Monument  
Kobuk Valley National Park  
Noatak National Preserve

United States Department of the Interior  
National Park Service

189 | 80015  
ARO | NOV84



- WESTERN & ARCTIC ALASKA  
TRANSPORTATION STUDY  
IDENTIFIED UTILITY CORRIDOR
- ROAD PROPOSED MINING ROAD
- PROPOSED OIL & GAS  
LEASE AREAS
- EXISTING OIL & GAS  
LEASES
- POTENTIAL MINE SITE
- BLM MANAGEMENT ZONE FOR  
CARIBOU & GRIZZLY BEAR
- FISH HATCHERY
- \*\*\*\*\* PROPOSED WILD & SCENIC RIVERS

ARCTIC OCEAN







- a) application, b) sociocultural impacts, and
- c) effectiveness in land protection.

# 1. Cooperative Agreements and Alaska Land Bank

Cooperative agreements are written agreements between two or more parties which can provide for the transfer of services, money or other benefits from one party to another.

ANILCA (Section 907) established the Alaska Land Bank Program to provide legal and economic benefits to private landowners and to provide for the maintenance of land in its natural condition, particularly where these non-federal lands relate to conservation system units. Native corporation lands (but not small patented tracts) will have immunity from adverse possession, real property taxes and assessments when brought into the land bank. They will also be immune from judgment in any action of law or equity to recover sums owed or penalties incurred by any Native corporation or group or any officer, director, or stockholder of the corporation or group.

a. Application. Some of the elements that could be addressed in a cooperative agreement include: each landowner's land management responsibilities, access for resource management activities, fire management, law enforcement, trespass control, enforcement of environmental protection laws, access for public use, maintenance of land in its natural condition, and exclusion of specific uses or activities.

Agreements and the land bank can also be used as an interim protective measure when long-term goals can not be immediately achieved. Assistance may be provided to private landowners without reimbursement if the Secretary of the Interior determines that it would further the agreement and be in the public interest.

b. Sociocultural Impacts. Impacts would be defined by the terms of the agreement. Since all parties would have to agree to its terms, it is unlikely there would be any negative or adverse impacts.

c. Effectiveness. Where economic incentives for private land development are limited or the landowner's uses of the land are basically compatible with management of adjoining monument lands, cooperative agreements could be a cost-effective, mutually beneficial means of

ensuring compatible uses on private land in the monument.

Land bank agreements will be particularly important in cooperating with Native corporations that own large tracts of land in and adjacent to the monument.

Advantages of agreements include their flexibility and relative low cost. Disadvantages include the potential increased administrative costs and the ability of one party to terminate on short notice.

## 2. Zoning by State and Local Governments

The zoning of land is based on the authority of state and local governments to protect public health, safety and welfare by regulating land use. At present the monument is not located within an organized borough, thus there is no local zoning. Should a borough or other form of regional government be formed which encompasses the monument, the National Park Service would propose the establishment of conservation zoning for the monument's land.

## 3. Easements

Land ownership may be envisioned as a package of rights. Acquiring an easement conveys only some of the rights from one owner to another, while other rights of ownership remain unchanged. Easements can include an array of rights ranging from limiting specific uses of the land to providing for public access.

a. Application. Easements are most likely to be useful where:

- Some, but not all, existing or potential private uses are compatible with monument's purpose
- Current owners desire to perpetuate existing use and occupancy of the land with limited conditions imposed by the National Park Service.
- Access across or protection of scenic values for the public is needed only over a portion of the land.

Terms and conditions for easements should be written to fit the topography, vegetation, visibility and character of existing or potential developments on each tract.

b. Sociocultural Impacts. The impacts of easements would vary depending on the rights acquired. Overall, the impacts would be judged

beneficial because both parties must agree to the terms before the easement goes into effect and because it would contribute to the fulfillment of the monument's objectives, while allowing the landowner's continued use of the land subject only to negotiated limitations.

c. Effectiveness. Because easements are permanent, enforceable interests in property, they provide greater assurances of permanent protection than do agreements or zoning ordinances. Easements are a "right" that stay with the property and are binding on future owners.

Advantages of easements include: continued private ownership and use subject to the terms of the easement, lower acquisition costs than fee simple purchase and consequently the potential to protect more land and or resources with available funds.

Disadvantages of easements as compared to fee simple acquisition include: potential difficulty of enforcement in remote areas, lack of familiarity of landowners with less-than-fee simple ownership, relatively high costs of acquisition on undeveloped properties where no further development is compatible, and costs incurred in monitoring terms and conditions of easement provisions over time.

#### 4. Fee Simple Acquisition

When all the interests in land are acquired, it is owned in fee simple.

a. Application. Fee simple acquisition may be recommended when other methods of protection have been found to be inadequate, inefficient or ineffective to meet management needs. Fee acquisition is most appropriate in the monument when land must be maintained in a pristine natural condition which precludes reasonable private use, when owned by individuals who do not wish to sell less-than-fee simple interest, when resources cannot be protected by other methods in accord with monument purposes, or when other alternatives would not be cost effective.

b. Sociocultural Impacts. Little change is likely to occur within the monument at the present time, since most land is only undeveloped and or seasonally utilized. If purchase were made, people would still be able to use the land for subsistence purposes, as they now use surrounding federal



lands. Exclusive use and development opportunities on acquired parcels would be precluded.

c. Effectiveness. Fee simple acquisition is the most secure land protection alternative; it is also often the most expensive and difficult method to accomplish. The ability to purchase fee simple interests is dependent on the appropriation of funds.

Advantages of fee simple acquisition include: permanent and complete control over uses of the land by the National Park Service, the ability to develop necessary facilities, private landowner's familiarity with this type of transaction, and the opportunity for continued private use when reservations for use and occupancy are included in the acquisition.

Disadvantages of fee simple acquisition include: acquisition costs, maintenance and management requirements (especially for developed properties), the potential relocation of private landowners, and the removal of housing and or land from the local market.

For a description of methods of acquisition see Appendix 1 of the Land Protection Plan.

## 5. Environmental Protection Standards

Activities and developments on non-federal land in the monument must meet applicable state and federal environmental protection laws and regulations. These authorities may help maintain the existing natural environment in the monument.

a. Application. These authorities include but are not limited to the Alaska Coastal Zone Management Program, Alaska Anadromous Fish Act, Clean Water and Clean Air Acts and Protection of Wetlands.

b. Sociocultural Impacts. Impacts are generally the same as those identified under zoning.

c. Effectiveness. These laws and regulations can assist in preventing harm to cultural resources and the natural environment, but would not necessarily preclude other activities that might adversely affect the monument's resources.

## V. RECOMMENDATIONS

The National Park Service is able to address a series of land protection actions in a logical order by applying a combination of the available methods. The major consideration in selecting site specific land protection alternatives is the need to comply with the intent of Congressional legislation that established the monument. This authority emphasizes the preservation and protection of the monument's resources. In all cases, the minimum interest needed to carry out the intent of Congress will be defined and sought. Fee simple acquisition is justified to protect significant resources that are essential to the purposes of the monument, to provide for public use, or for improved resource management capability. A conservation easement is appropriate to protect the monument from incompatible developments that would impair its environment and detract from the public's use of the monument. Cooperative agreements are proposed to ensure that the management of private lands would be consistent with monument objectives. The following list of priorities is based on the resource values of the monument; potential threats to the land and resources; and non-federal landowners' interests in selling, trading, exchanging, or entering into an agreement of one form or another.

### Priorities

#### Priority Group 1

This group consists primarily of Native allotments located between the outlet of Krusenstern Lagoon (Tukruk River) on the south and Battle Rock on the north. The group includes the allotments located on Cape Krusenstern itself. The primary reason for creating the monument was to protect the known significant cultural resources of the beach ridges at the cape. Some of the allotments are believed to lie atop known significant cultural resources, while others are suspected to be located where there is a high probability of significant cultural resources. (See Land Protection Priority Groups Map, page 4-25.)

#### Priority Group 2

This group contains Native village and regional corporation lands that would be involved in the proposed Cape Krusenstern Land Exchange. These lands are located along the extreme northwestern boundary (parts of three townships) and along the extreme eastern boundary (all or parts of seven townships). In the exchange proposal, the Native lands in the northeastern portion of the

monument (approximately 103,338 acres) and a small parcel along the northwestern coast (approximately 1,345 acres) would be exchanged for monument lands (approximately 62,084 acres) located in the northwestern portion of the monument. In addition, the National Park Service would receive a conservation easement on 10,942 acres of Native land in the southeastern corner of the monument (see priority group 3) and an easement and public use and occupancy right for a 5-acre administrative site within or near the Onion Portage Historic District in Kobuk Valley National Park. (See Land Protection Priority Groups Map, page 4-25.)

### Priority Group 3

This group contains Native allotments and Native lands in the southeastern portion of the monument. The allotments, mostly along the coastline, are in areas where less is known about the cultural resources than those in Group 1, but where the probability for significant resources is considered to be high, especially on Sheshalik Spit. Some of the Native corporation lands in this group would be affected by the proposed Cape Krusenstern Land Exchange, but fee simple title would not change hands. Instead, the National Park Service would receive a conservation easement on the lands (approximately 10,942 acres) for the protection and study of resource values. (See Land Protection Priority Groups Map, page 4-25.)

### Priority Group 4

This group consists of allotments located between Battle Rock and Imik Lagoon. Little work has been done to investigate the potential for cultural resources in this area. But the proximity to sites such as Battle Rock would indicate that there is reason to suspect a high occurrence of cultural resource sites. (See Land Protection Priority Groups Map, page 4-25.)

# LAND PROTECTION PRIORITY GROUPS

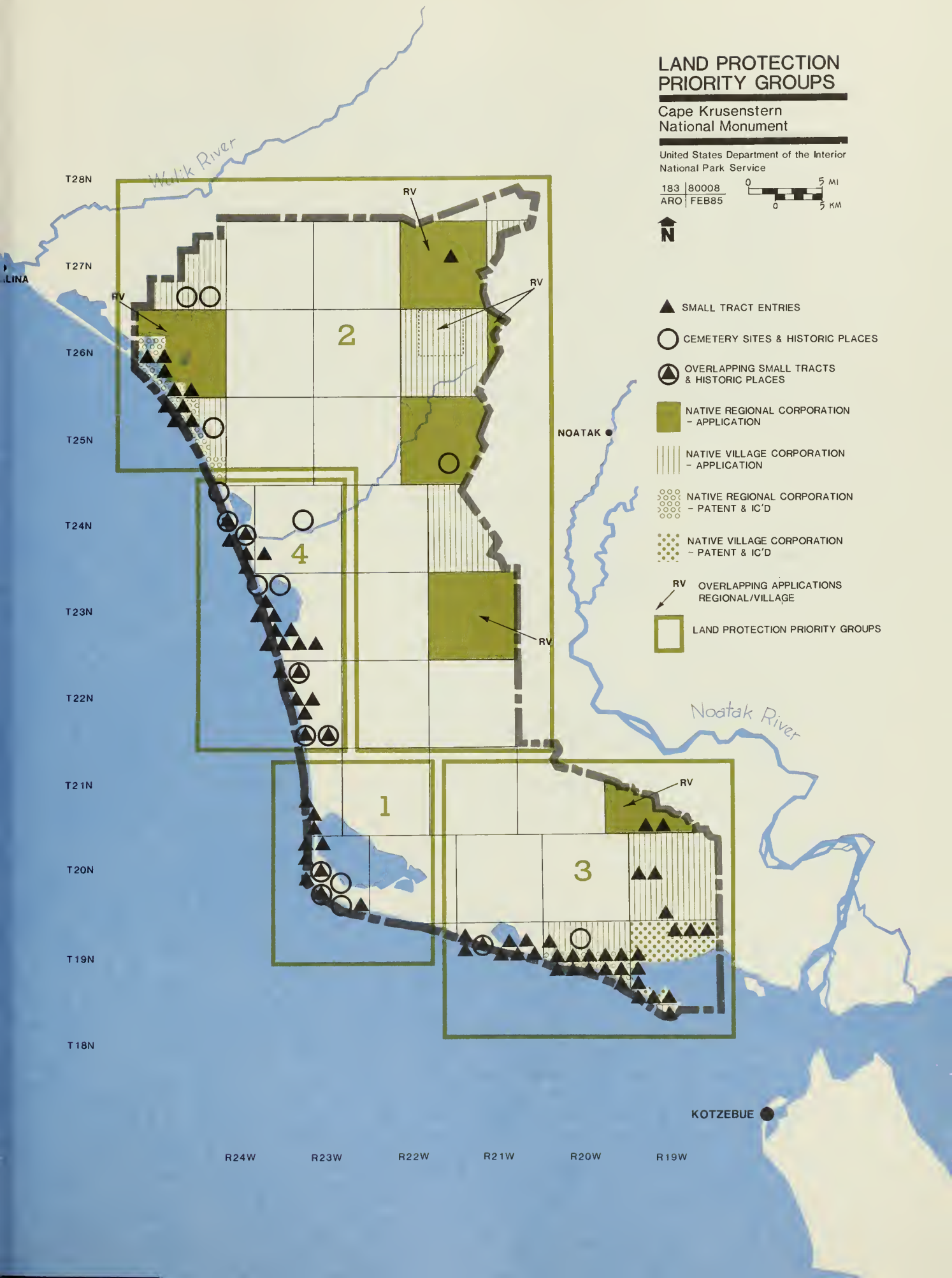
Cape Krusenstern  
National Monument

United States Department of the Interior  
National Park Service

183 | 80008  
ARO | FEB85



- ▲ SMALL TRACT ENTRIES
- CEMETERY SITES & HISTORIC PLACES
- ⊙ OVERLAPPING SMALL TRACTS & HISTORIC PLACES
- NATIVE REGIONAL CORPORATION - APPLICATION
- ▨ NATIVE VILLAGE CORPORATION - APPLICATION
- ⊘ NATIVE REGIONAL CORPORATION - PATENT & IC'D
- ⊙ NATIVE VILLAGE CORPORATION - PATENT & IC'D
- RV OVERLAPPING APPLICATIONS REGIONAL/VILLAGE
- LAND PROTECTION PRIORITY GROUPS







## Specific Proposals

The recommended land protection approaches for non-federal land are listed below. Owners, acreages to be protected, minimum interest needed for protection, justification and proposed method of acquisition are also shown. The actual means of acquisition of land or interest in land will not be known until negotiations are initiated. From the federal point of view, exchange is a preferred method; donations are encouraged. Purchase with appropriated or donated funds, bargain sales, and leaseback/sellback are other possibilities. Exercising the power of eminent domain is not recommended although it could be used where allowed by law to prevent land use activities that would severely damage the monument's integrity. Tracts within each of the following priority groups are considered relatively equal in priority. An index to non-federal interests is contained in Appendix 2 of the Land Protection Plan.

### Priority Group 1

#### A. Type of Ownership: Native Allotments

Location: Between the outlet of Krusenstern Lagoon (Tukruk River ) on the south and Battle Rock on the north.

Number: 30 allotments (36 parcels).

Parcels: 2B, 7B, 20, 22A, 22B, 23, 27, 28, 29, 33, 34, 35, 36, 37, 38, 39A, 44A, 44B, 46A, 46B, 51A, 51B, 51C, 52B, 53, 54, 55, 56, 58B, 61, 71, 75, 79, 81A, 81B, 83 (see appendix 2 for a description of these parcels).

Total Acreage: 3,665.

Minimum Interest Needed: Fee Simple.

Justification: These allotments are located primarily on the beach ridges of Cape Krusenstern. The major reason for creating the monument was to protect the significant cultural resources of the beach ridges. Some of these allotments lie atop these resources, while others are suspected to be located where

there is a high probability of significant cultural resources. Further cultural resource survey of the area is proposed to identify the locations of additional significant resources. Based on the results of these surveys, the National Park Service would propose to acquire fee simple title to those allotments or portions of allotments containing significant cultural resources to assure their long-term protection and possible interpretation. For those allotments not containing significant resources, the National Park Service would propose to acquire less-than-fee simple interests (easements) or cooperative agreements to maintain current uses. These uses, primarily subsistence related, are compatible with the purpose and proposed management of the monument. Changes in these uses that would result in significant additional development or population increases would be viewed as incompatible with the purposes of monument.

Method of Acquiring Interest:

Donation, Purchase, Exchange.

B. Type of Ownership: Cemetery and historical sites applied for under Section 14(h)(1) of ANCSA.

Location:

Between the outlet of Krusenstern Lagoon (Tukruk River) on the south and Battle Rock on the north.

Number:

6

Parcels:

87,\* 88,\* 89, 90, 103,\* 105 (see appendix 2 for a description of the parcels). (\*Overlapping applications.)

Total Acreage: 2,050 net acres applied for.

Minimum Interest  
Needed: Fee simple.

Justification: These sites are located primarily on the beach ridges of Cape Krusenstern. The primary reason for creating the monument was to protect the significant cultural resources of the beach ridges. Any cultural resources these sites may contain form part of the cultural resource base of the monument and should remain in the ownership of the United States for protection and possible interpretation. The National Park Service is mandated to protect cultural values and would manage these sites with sensitivity to Native concerns.

Method of Acquiring Interest: Relinquishment of 14(h)(1) selections so that lands would remain in federal ownership.

#### Priority Group 2

A. Type of Ownership: Native Regional Corporation (NANA) Native Village Corporations (Kivalina, Noatak)

Location: Lands that would be involved in the proposed Cape Krusenstern land exchange. These lands are located along the extreme northwestern boundary (parts of three townships) and along the extreme northeastern boundary (all or parts of seven townships).

Parcels: 108, 109, 110, 111, 112, 113, 114, 115, 116, 120.

Total Acreage: 234,807



Minimum Interest  
Needed:

Fee simple - 104,683 acres.  
Cooperative Agreement - 130,124  
acres (includes 62,084 acres  
presently in federal ownership  
which would be transferred to  
NANA).

Justification:

The Native Corporation lands in the northeastern portions of the monument (approximately 103,338 acres) and a small parcel along the coast (approximately 1,345 acres) would be exchanged for monument lands (approximately 61,084 acres) located in the northwestern portion of the monument. This would in effect locate the bulk of the native lands in the northwestern portion of the monument. This would place the facilities related to the proposed Red Dog Mine on private lands within the monument boundaries and relieve the National Park Service of direct management responsibility related to these facilities. As part of the exchange covenants, servitudes and easements shall be reserved by or conveyed to the United States to provide for protection and study of cultural and natural resources on the majority of lands conveyed to NANA. An Alaska Land Bank or other type of cooperative agreement would assist in the protection of the lands exchanged or conveyed to assure compatibility with the monuments's purpose and management. The reacquisition of those lands at some future time, should NANA be willing, would not be precluded by the exchange.

Method of Acquir-  
ing Interest:

Exchange and Cooperative  
Agreements.

- B. Type of Ownership: Native allotments.
- Location: Surrounded by lands that would be involved in the proposed Cape Krusenstern Land Exchange.
- Number: 6 allotments (7 parcels).
- Parcels: 11,15, 16,18, 21C, 21D, 74.
- Total Acreage: 560.
- Minimum Interest Needed: Contractual (cooperative agreement).
- Justification: Six of the parcels would be surrounded by Native regional and village corporation lands under the proposed exchange. One parcel (no. 11) would be surrounded by monument lands. Under present compatible uses a cooperative agreement should be sufficient to maintain monument values. On the other six that would be surrounded by Native corporation owned lands, Alaska Land Bank or other type of cooperative agreement consistent with the land exchange agreement would be sufficient to protect significant cultural or other resource values.
- Method of Acquiring Interest: Cooperative agreement.
- C. Type of Ownership: Cemetery and historical sites applied for under Section 14(h)(1) of ANCSA.
- Location: Surrounded by lands that would be involved in the proposed Cape Krusenstern Land Exchange.
- Number: 4
- Parcels: 95, 100, 101, 104.
- Total Acreage: 2,125 acres applied for.

Minimum Interest  
Needed:

Parcel 104 - Fee simple.  
Parcels 100, 101, 104 -  
Contractual (cooperative  
agreements).

Justification:

Any cultural resources these sites may contain, would form part of the cultural resource base of the monument and should remain in the ownership of the United States for protection and possible interpretation. The National Park Service is mandated to protect cultural values and would manage the site with sensitivity to Native concerns.

Method of Acquir-  
ing Interest:

104 - Relinquishment of  
14(h)(1) selection so that  
lands would remain in federal  
ownership.  
100, 101, 104 - cooperative  
agreements.

### Priority Group 3

A. Type of Ownership: Native Regional Corporation  
(NANA Corporation)

Location: Southeastern corner of  
monument.

Parcels: 106

Total Acreage: 10,942

Minimum Interest  
Needed:

Less-than-fee (easement)

Justification:

This township contains native corporation lands in the southeastern corner of the monument including portions of Sheshalik Spit not covered by Native allotments. These lands would be affected by the proposed Cape Krusenstern Land Exchange. The National Park Service would receive equitable servitudes and a conservation

easement for the protection and study of resource values. Because of the numerous native allotments in this area, especially on Sheshalik Spit, continued development of seasonal homes, fishing camps, etc. is considered likely. NANA intends to retain these lands but involve the National Park Service in planning any development and provide protective procedures for cultural resources and allow study of cultural resources. A limited non-development easement is necessary to assure compatible uses only. A conservation easement would limit development from expanding onto adjoining corporation lands.

Method of Acquiring Interest:

Exchange.

B. Type of Ownership: Native Regional and Village Corporation (NANA and Kikitagaruk Inupiat Corp).

Location: Southeastern portion of monument.

Parcels: 107, 117, 118, 119.

Total Acreage: 55,497

Minimum Interest Needed: Contractual (cooperative agreement).

Justification: These lands are in areas where less is known about the cultural resources than those in Group 1, but where the probability for significant resources is considered to be high, especially on Sheshalik Spit. In order to determine the presence of significant cultural resources, the National Park Service would seek an Alaska Land Bank or



other agreement with NANA and KIC to provide for further inventory, evaluation and protection of cultural resources to the degree possible. Limitations on developments are necessary elements of any agreement to maintain uses compatible with the purposes of the monument.

Method of Acquiring Interest:

Cooperative agreement, Alaska Land Bank entry.

C. Type of Ownership: Native Allotments

Location: Southeastern portion of the monument

Number: 38 Allotments (42 Parcels)

Parcels: 1, 2A, 3A, 3B, 4A, 4B, 5, 6, 7A, 8C, 9, 10, 14, 19A, 24, 25, 31B, 32, 39B, 40, 41, 42, 43A, 43B, 45, 52A, 57, 58A, 59A, 60, 63, 66A, 67, 68, 72, 76, 77, 78A, 78B, 80, 82, 84, 122, 123.

Total Acreage: 3,974

Minimum Interest Needed:

Contractual (cooperative agreement).

Justification:

The allotments, mostly along the coastline including Sheshalik Spit, are in areas where less is known about the cultural resources than those in Group 1. The probability for significant resources is thought to be high, especially on Sheshalik Spit. In order to determine the presence of significant cultural resources, the National park Service would propose an Alaska Land Bank or other agreement with the allotment owners to provide for further inventory, evaluation and protection of cultural resources to the degree

possible. The agreements would also propose to limit significant development and uses beyond existing levels in order to assure continued compatibility with the purposes of the monument.

Method of Acquiring Interest:

Cooperative agreement, Alaska Land Bank entry.

D. Type of Ownership: Cemetery and Historical Sites applied for under Section 14(h)(1) of ANCSA.

Location: Southeastern portion of the monument.

Number: 1

Parcels: 86

Total Acreage: 625 applied for.

Minimum Interest Needed:

Fee simple.

Justification:

This site was selected and applied for under Section 14(h)(1) of ANCSA on the basis that it contains cemeteries or historical values of local or regional native concern. Any cultural resources this site may contain forms part of the cultural resource base of the monument and should remain in the ownership of the United States for protection and possible interpretation. Relinquishment of the site selection by the applicant is recommended.

Method of Acquiring Interest:

Relinquishment of 14(h)(1) selection so that lands remain in federal ownership.

#### Priority Group 4

A. Type of Ownership: Native Allotments

Location: Beginning north of Battle Rock and going north to the south half of Imik Lagoon.

Number: 13

Parcels: 12, 13, 17, 30, 47, 48, 49, 50, 62, 65, 69, 70, 85 (see appendix 2 for a description of these parcels).

Total Acreage: 1,720

Minimum Interest Needed: Contractual (cooperative agreement).

Justification: The allotments, located mostly along the coastline north of Battle Rock, are in areas where little work has been done to investigate the potential for cultural resources. But, the proximity to sites such as Battle Rock indicates that there is reason to suspect a high occurrence of cultural resource sites. In order to determine the presence of significant cultural resources, an Alaska Land Bank or other agreement with the allotment owners is appropriate to provide for further inventory, evaluation and protection of cultural resources. The agreements would also propose to limit significant development and uses beyond existing levels in order to assure continued compatibility with the purposes of the monument.

Method of Acquiring Interest: Cooperative agreement, Alaska Land Bank entry.

B. Type of Ownership: Cemetery and Historical Sites applied for under Section 14(h)(1) of ANCSA.

Location: Beginning north of Battle Rock and going to the south half of Imik Lagoon.

Number: 9

Parcels: 91,\* 92, 93,\* 94, 96, 97, 98,\* 99, 102.\*  
(\*Overlapping applications)

Total Acreage: 1,130 net acres applied for.

Minimum Interest Needed: Fee simple.

Justification: These sites were selected and applied for under Section 14(h)(1) of ANCSA on the basis that they contain cemeteries or historical values of local or regional Native concern. Any cultural resources these sites may contain form part of the cultural resource base of the monument and should remain in the ownership of the United States for protection and possible interpretation. Relinquishment of the site selection by the applicant is recommended.

Method of Acquiring Interest: Relinquishment of 14(h)(1) selection so that lands remain in federal ownership.

C. Type of Ownership: Navigable Waters/Submerged Lands

Location: Kotzebue Sound

Number: N/A

Parcels: 121

Total Acreage: 10,095

Minimum Interest  
Needed:

Contractual (cooperative agreement).

Justification:

At the time of Alaska statehood, title to the coastal tidelands and submerged lands and the submerged lands beneath interior navigable waters was vested in the State pursuant to the Submerged Lands Act of 1953. Determination of navigable waters with respect to title of the beds of such waters is an ongoing process. Where the State is determined to own submerged lands (as is the case for submerged lands in Kotzebue Sound within the monument boundaries) cooperative agreements are necessary to protect the monument values associated with the beds or waters or adjacent lands. Of particular concern in Kotzebue Sound and in the Chukchi Sea are seals and other marine mammals. In creating the monument, Sec. 201(3) of ANILCA specifically mentions protection of habitat for seals and other marine mammals. In addition, the National Park Service will work with the State to incorporate protection of marine mammal habitat into its Northwest Region Land Use Plan being prepared by the Department of Natural Resources.

Method of Acquiring Interest:

Cooperative agreement.



APPENDIX 1

LAND PROTECTION PLAN

METHODS OF ACQUISITION

There are four primary methods of acquisition of fee simple and less-than-fee interests in lands: donation, purchase, exchange and relinquishment. Discussion of these methods follows:

Donation: Landowners may want to donate their land or specific interests in their land to achieve conservation objectives. Tax benefits of a donation could also be an important incentive to some people. Donations of fee simple title are deductible from taxable income. Easement donations also may provide deductions from taxable income, but are subject to certain Internal Revenue Service requirements to qualify as a charitable contribution.

Landowners are encouraged to consult accountants or tax attorneys to discuss the detailed advantages of donations. National Park Service representatives may be able to provide some general examples of tax advantages, but cannot provide tax advice or commitments of what deductions would be allowed by the Internal Revenue Service.

Exchange: Land or interests in land may be acquired by exchange. The land to be exchanged must be located in Alaska and must be of approximately equal value. Any small differences in value may be resolved by making cash payments.

The National Park Service would also consider other federal lands within the authorized boundary as potential exchange lands to consolidate National Park Service management.

The National Park Service would work with the Bureau of Land Management and The General Services Administration to determine if any additional federal land may be available for exchange purposes if such lands become available.

Purchase: Acquisition by purchase requires funds to be appropriated by Congress or donated from private sources. Funding for purchases depends primarily on future appropriations. Potential donations of funds or purchases by individuals or organizations interested in holding land for conservation purposes would be encouraged.

Relinquishment: State and Native corporation land under application may be relinquished resulting in retention of the lands in fee ownership by the National Park Service. The relinquishing entity can utilize the acreage being relinquished to acquire other lands outside the monument.

# APPENDIX 2

## LAND PROTECTION PLAN

### CAPE KRUSENSTERN NATIONAL MONUMENT

#### INDEX FOR NON-FEDERAL INTERESTS

(based on 8/22/84 BLM printout)

Parcel	Applicant/Owner	Native Allotments		Priority Group
		Serial #	Acres	
1	Sours, Belle	FF012408	75.00	3
2A	Harris, Henry S. Sr.	FF013097	(78.00)	3
2B	Harris, Henry S. Sr.	FF013097		1
3A	Hess, Wilson A.	FF013099	(157.00)	3
3B	Hess, Wilson A.	FF013099		3
4A	Uhl, Carrie K.	FF013101	(100.00)	3
4B	Uhl, Carrie K.	FF013101		3
5	Gallahorn, Richard Sr.	FF013126	18.00	3
6	Harris, Nereus Sr.	FF013306	17.90	3
7A	Wilson, Dora L.	FF013307	(126.00)	3
7B	Wilson, Dora L.	FF013307		1
8C	Mills, Levy A. Sr.	FF013332	80.00	3
9	Williams, David S.	FF013452	20.00	3
10	Williams, May S.	FF013453	8.00	3
11	Towksjhea, Julian	FF013622	80.00	2
12	Booth, Elwood E.	FF013757	80.00	4
13	Stalker, Alfred	FF013782	79.99	4
14	Kenworth, Walter B.	FF013826	160.00	3
15	Swan, Milton N.	FF013916	80.00	2
16	Adams, Tillman E.	FF014241	80.00	2
17	Barr, Samuel P.	FF014242	160.00	4
18	Wesley, Bruce N.	FF014248	80.00	2
19A	Gallahorn, Hannah	FF014656	20.00	3
20	Mitchell, Thomas O.	FF015011	160.00	1
21C	Adams, Ruth S.	FF015042	(80.00)	2
21D	Adams, Ruth S.	FF015042		2
22A	Haviland, Lydia M.	FF016062	88.00	1
22B	Haviland, Lydia M.	FF016062		1
23	Williams, Frank	FF016063	160.00	1
24	Flood, Hazel	FF016342	142.00	3
25	Greene, Frank P.	FF016456	105.00	3
26	Unassigned			
27	Sheldon, Percy	FF016472	160.00	1
28	Thomas, Elmer W. Jr.	FF016474	160.00	1
29	Thomas, Mable	FF016475	160.00	1
30	Stalker, John	FF016521	160.00	4
31B	Shiedt, Enoch E.	FF017438	80.00	3
32	Clark, Norman J.	FF017547	160.00	3
33	Gallahorn, Lester	FF017549	160.00	1
34	Greene, Catherine	FF017550	160.00	1

Parcel	Applicant/Owner	Native Allotments		
		Serial #	Acres	Priority Group
35	Harris, Albert A.	FF017551	160.00	1
36	Harris, Sarah J.	FF017552	160.00	1
37	Jones, Blanche R.	FF017554	90.00	1
38	Jones, Frankie N.	FF017555	160.00	1
39A	Jones, James L.	FF017556	(120.00)	1
39B	Jones, James L.	FF017556		3
40	Joule, Reginald L.	FF017557	160.00	3
41	Kennedy, George	FF017559	160.00	3
42	Mitchell, Clifford	FF017561	160.00	3
43A	Schaefer, Robert J.	FF017563	(160.00)	3
43B	Schaefer, Robert J.	FF017563		3
44A	Sheldon, Doug Sr.	FF017564	(160.00)	1
44B	Sheldon, Doug Sr.	FF017564		1
45	Sheldon, Frank	FF017565	80.00	3
46A	Snyder, Daniel Sr.	FF017566	(120.00)	1
46B	Snyder, Daniel Sr.	FF017566		1
47	Stalker, Daniel C. Sr.	FF017567	160.00	4
48	Stalker, Dora D.	FF017568	160.00	4
49	Stalker, Jacob A. Sr.	FF017569	160.00	4
50	Stalker, Lucy	FF017570	160.00	4
51A	Williams, Elmer J. Sr.	FF017573	(160.00)	1
51B	Williams, Elmer J. Sr.	FF017573		1
51C	Williams, Elmer J. Sr.	FF017573		1
52A	Wright, Roger K.	FF017575	160.00	3
52B	Wright, Roger K.	FF017575		1
53	Adams, Herbert	FF017576	40.00	1
54	Foster, Herbert	FF017580	160.00	1
55	Fox, Rhoda Forslunch	FF017581	160.00	1
56	Gallahorn, Jessie	FF017582	45.00	1
57	Green, Charles	FF017583	160.00	3
58A	Green, Amos S.	FF017584	160.00	3
58B	Green, Amos S.	FF017584		1
59A	Hess, Bertha	FF017588	80.00	3
60	Hunnicutt, Daniel B.	FF017589	160.00	3
61	Mendenhall, Mary Ann	FF017592	160.00	1
62	Russell, Homer E.	FF017595	80.00	4
63	Schaefer, Roswell L. Sr.	FF017596	160.00	3
64	Unassigned			
65	Armstrong, Elmer Sr.	FF017621	40.00	4
66A	Shiedt, Mida G.	FF017629	80.00	3
67	William, Russell O. Sr.	FF017682	160.00	3
68	Ferguson, Carrie M.	FF017727	43.00	3
69	Stalker, Marie	FF017732	160.00	4
70	Stalker, Ross E. Sr.	FF017733	160.00	4
71	Mills, Kenneth A.	FF017999	40.00	1
72	Mendenhall, Collins	FF018494	40.00	3
73	Unassigned			
74	Adams, Russell	FF018645	160.00	2
75	Williams, Whittier Jr.	FF019181	160.00	1
76	Mendenhall, Fannie P.	FF013100	86.00	3

<u>Parcel</u>	<u>Applicant/Owner</u>	<u>Native Allotments</u>		<u>Priority Group</u>
		<u>Serial #</u>	<u>Acres</u>	
77	Mendenhall, William	FF016343	35.00	3
78A	Hess, Delbert	FF017553	(160.00)	3
78B	Hess, Delbert	FF017553		3
79	Keats, Perry	FF017558	160.00	1
80	Barger, Gladys L.	FF017577	65.00	3
81A	Williams, Samuel T.	FF017605	(160.00)	1
81B	Williams, Samuel T.	FF017605		1
82	Stalker, Clara	FF018563	160.00	3
83	Christiansen, Virginia	FF021749	40.00	1
84	Schaeffer, Mildred	FF082012	160.00	3
85	Smith, Ella	FF083937	160.00	4
122	Schaeffer, Mabel	FF016469	80.00	3
123	Outwater, Enos	FF018377	80.00	3

Cemetery/Historical Sites

86	NANA	FF021237	625	3
87*	NANA	FF021238	240	1
88*	NANA	FF021239	1,405	1
89	NANA	FF021240	405	1
90	NANA	FF021241	490	1
91*	NANA	FF021242	105	4
92	NANA	FF021243	10	4
93*	NANA	FF021244	545	4
94	NANA	FF021245	55	4
95	NANA	FF021246	195	2
96	NANA	FF022274	10	4
97	NANA	FF022275	10	4
98*	NANA	FF022276	10	4
99	NANA	FF022277	405	4
100	NANA	FF022278	1,280	2
101	NANA	FF022279	10	2
102*	NANA	FF022297	105	4
103*	NANA	FF022299	20	1
104	NANA	FF022300	640	2
105	NANA	FF022303	10	1

\*Overlapping applications. Net acreage applied for is 5,589.

Native Regional Corporation

106	NANA	FF1915420	11,918	3
107	NANA	FF1915441	10,222	3
108	NANA	FF1915428	17,174	2
109	NANA	FF1915429	22,829	2
110	NANA	FF1915432	2,466	2
111	NANA	FF1915434	22,359	2
112	NANA	FF2187026	22,833	2
113	NANA	FF 032014	5,760	2



<u>Parcel</u>	<u>Applicant/Owner</u>	<u>Native Allotments</u>		<u>Priority Group</u>
		<u>Serial #</u>	<u>Acres</u>	
<u>Native Village Corporation</u>				
114	Kivalina	FF014876B	3,383	2
115	Kivalina	FF014876C	2,861	2
116	Kivalina	FF014876B2	32,524	2
117	Kotzebue	FF014880 N	115	3
118	Kotzebue	FF014880 0	4,580	3
119	Kotzebue	FF014880B2	40,580	3
120	Noatak	FF014907B2	102,678	2
<u>Navigable Waters/Submerged Lands</u>				
121	State of Alaska (Kotzebue Sound)	NA	10,095	NA



IMPLEMENTATION



## CHAPTER 5

### IMPLEMENTATION

The key to effectively implementing alternative 1, the alternative preferred by the National Park Service, is the addition of new staff as proposed. With the 13 positions there would be enough personnel to carry out the actions, research studies, and cooperative agreements proposed. The second factor of importance is the expansion of administrative office space, facilities for visitor contact, construction of government housing and an aircraft facility. With people and facilities progress could begin, in earnest, toward carrying out the proposals in alternative 1. Construction and operations of a museum is proposed as a cooperative venture and is expected to be carried out over many years. Until an agreement between interested parties is drawn up and signed no time tables can be presented.

Implementation of alternative two is not presented because it is a continuation of existing practices and tasks with existing staff and facilities.

The lists below provide a checklist for implementation. Because funding requests govern implementation to such a large degree, presentation of a dated implementation schedule is not practical at this time. Where cost estimates are available they have been presented.

#### IMPLEMENTATION CHECKLISTS

##### Cultural Resources Research

1. Cape Krusenstern National Monument cultural resources inventory.
2. Archeological site monitoring and impact survey.
3. Archeological collections inventory project.
4. Cape Krusenstern ethnohistory and oral history project.

##### Natural Resources Research

1. Population data: big game and fur bearing species.
2. Role of natural fire in Northwest Alaska ecosystem.
3. Base line study of the genetic characteristics and monitoring of Noatak River chum salmon.
4. Compilation and analysis of big game harvest information on all harvested species.
5. Base line study of ecosystem dynamics within the Northwest Alaska.
6. Study and monitor of ungulate caribou and moose habitat.
7. Study of the impacts of existing and proposed methods of transportation on Northwest Alaska ecosystems.

8. Analysis and monitoring of conflict between subsistence and recreational users.
9. Musk ox cooperative management and reintroduction plan.
10. Endangered species inventory and monitoring cooperative survey.
11. Base line research on waterfowl and shorebirds with emphasis on Cape Krusenstern and Sheshalik Spit.
12. Cooperative base line research on fisheries populations and pressures.
13. Base line research into the potential for mineral extraction.
14. Impact study on popular visitor use areas.
15. Air quality monitoring.
16. Water quality, monitoring.
17. Cooperative timber inventory.

#### Public Use Research

1. Commerical use study.
2. Subsistence management plan.
3. Commercial fishing study (1979 levels).

#### Cooperative Agreements

1. Cooperative agreement with the of Alaska State Museum, NANA, KIC, University of Alasaka Museum, City of Kotzebue, and others focusing on development of a regional museum in Kotzebue.
2. Cooperative agreement(s) with NANA, KIC, and owners of the Native allotments focusing on protection of cultural resources and native and cemetery sites throughout the monument.
3. Cooperative agreement with NANA, KIC, BLM, USF&WS and the State of Alaska focusing on inventory and management of timber in the region.
4. Cooperative agreement with the USF&WS specifying terms and conditions of shared facilities in Kotzebue.

#### Development in Kotzebue:

1. Lease, purchase, or construction of facilities including: expanded administrative offices and visitor center, construction of one fourplex housing unit.

#### Development in the Monument:

1. One seasonal ranger station in the southern half of the monument.
2. One permanent ranger station in the northern half of the monument.

#### Other Actions

1. File for in-stream flow water rights with the State of Alaska.



## Estimate of Development Costs (Alternative 1)

<u>Item</u>	<u>Estimated Cost*</u>
1. Administrative Offices: 3,000 square feet	\$525,000
2. Government Housing:	
One 5,000 square foot fourplex	650,000
3. Shop and storage space: 6,000 square feet	600,000
4. Aircraft hanger: 3,000 square feet heated and 4,000 square feet outdoor surfaced	420,000
5. Ranger Stations:	
Southern ranger station, 400 square feet (2 buildings)	55,000
Northern ranger station, 2,000 square feet	<u>300,000</u>
Total Development Costs	\$2,545,000**

\*Estimates are NPS class C estimates which are expected to be accurate to plus or minus 30%. Estimates are based upon existing bidding and contracting policies and reflect costs expected if each item were bid separately. It is realized that significant reductions are possible if more than one item is put out to bid with other items so that larger bid packages are created.

\*\* Costs on items 1-4 will be shared with Noatak National Preserve and Kobuk Vally National Park budgets as presented in the draft general management plans for those areas.

Estimated Annual Operating Costs for Northwest Areas  
(Cape Krusenstern, Kobuk Valley, and Noatak)

	<u>Alternative 1</u> <u>Proposed</u>	<u>Alternative 2</u> <u>Existing</u>
<u>Personnel</u> (includes permanent and seasonal staff benefits, travel, overtime, etc.)	600,000	383,600
<u>Rent, Communication and</u> <u>Utilities</u> (NANA building, quonset hut, phones, etc.)	130,000(a)	61,300
<u>Services and Supplies</u> (OAS aircraft, other services, consummable supplies, etc.)	350,000	98,800
<u>Capitalized Equipment</u>	100,000(b)	27,400(b)

a. Costs would be reduced if U.S. Fish and Wildlife Service shares costs and if OAS budgeted for this item.

b. Does not include replacement costs.



## ENVIRONMENTAL CONSEQUENCES



## CHAPTER 6

### ENVIRONMENTAL CONSEQUENCES

The following discussion presents the environmental impacts that would be expected to occur as a result of the implementation of the two management alternatives. It addresses impacts on cultural and natural resources, public uses, monument administration and operations, and socioeconomic conditions in the region.

#### IMPACTS OF ALTERNATIVE 1 (PREFERRED ALTERNATIVE)

##### Cultural Resources

The preferred alternative would establish the monument's priorities and procedures for completing the mandated responsibilities to identify, evaluate, and interpret the significance of all the monument's cultural resources. This process would be gradually carried out, dependent upon the availability of funding, resource threats, and development actions. The proposed cultural resource management activities would serve to identify and record the extent of significant resources, to preserve or adaptively use resources as appropriate, and to ensure that other activities within the monument do not compromise the integrity of cultural resources. Any future actions including development of National Park Service ranger stations and administrative sites that affect cultural resources would be consistent with the National Park Service policies, and all appropriate cultural resource preservation laws, regulations, and procedures.

Development of an information and interpretive program, as well as expanded visitor facilities in Kotzebue, would help foster a greater understanding of and appreciation for the cultural resources of the monument by visitors and local residents. Through a better understanding, some potential impacts of subsistence and recreational activities on cultural resources would be mitigated. The increased presence of park staff within the monument including the proposed ranger stations would result in more active monitoring and protection of cultural resources, than has occurred in past years or which would occur without the rangers station.

The establishment of new cooperative research efforts and agreements with other agencies with responsibilities within the region would serve to provide greater expertise in the resolution of issues and problems related to management of cultural resources within the monument and surrounding areas.



The National Park Service would evaluate the mail cabin for its historical significance and potential adaptive re-use as a southern ranger station.

### Natural Resources

The population of wildlife (including terrestrial and marine mammals, birds, and fish) within the monument would be maintained in their natural abundance, behavior diversity, and ecological integrity under the preferred alternative. This would be accomplished through proposed research and continued cooperation with the State's fish and game management system according to the requirements of ANILCA and the Master Memorandum of Understanding between the Alaska Department of Fish and Game and the National Park Service. Subsistence hunting, fishing, and trapping, and sport fishing activities would not be diminished under the proposal, unless an emergency situation emerged wherein threats to public safety, health or the continued viability of a species of wildlife would require a temporary closure. The recommendation of a prohibition of either sex hunting of Dall sheep within the Igichuk Hills, if accepted and implemented by the State's Board of Game, could assure the continued viability of a small and isolated band of sheep which currently frequents the southern portion of the monument.

Continued use and implementation of the Kobuk Interagency Fire Plan enables monument staff to allow natural fires to burn, and thus fulfill their ecological role on these lands, while simultaneously allowing staff to be prepared to protect life, property, and archeological values as identified in the fire plan.

The completion of a fire history for lands within the three National Park Service Northwest Areas would enable the National Park Service to develop models of fire behavior and thus to develop more accurate fire prescriptions. The National Park Service would thereby be better prepared to reduce the hazards of wildfire which may have the potential to destroy property and take human lives.

An element of the resource management proposal is the timber resource survey which would enable monument managers to identify the current status and regenerative capacity of the monument's sparse, yet sought-after timber resource. Implementation of the survey's recommendation would enable the National Park Service to protect the viability of sparse forest stands by allocating the use of live trees in proportion to the needs of customary and traditional use.

The requirement that all timber cut within the monument be used within the monument's boundaries, as is now the case, would continue to limit the demand for timber to persons living inside the boundary. For example, timber would not be used for cabin construction on outlying lands but could be used for construction on privately owned lands within the monument boundary such as in the Sheshalik area. While this might protect the viability of forest stands within the monument until the proposed timber resource survey had been completed, it could also have the effect of increasing the demand by residents in the region for timber on adjacent federal, state, and private lands.

A variety of other proposed research efforts which hold potential for minimizing future negative effects upon wildlife and habitat include an evaluation of ecosystem dynamics within the monument, a survey of large mammal species within the region, a waterfowl and shorebird survey, a documentation of the extent of any threatened and endangered species within the monument, and expanded fisheries research. (Threatened and endangered species are discussed further, see p. 2-43 and Appendix D.) Additionally, the proposed comprehensive system for harvest ticket reporting and further cooperation between the National Park Service and the Alaska Department of Fish and Game in accordance with the current interagency master memorandum of understanding would assure harvest methods and levels which do not adversely impact the natural and healthy populations of large mammals. The monitoring of trapping practices within the monument as well as the routes and modes of access for subsistence hunting would help to ensure natural and healthy wildlife populations, continued subsistence opportunities for local residents, and prevent negative impacts upon soils and vegetation.

Sampling of air and water quality to establish base line information would enable monument managers in cooperation with the Alaska Department of Environmental Conservation and the Environmental Protection Agency to enforce applicable state/federal air and water quality standards. Such information would also enable the National Park Service in evaluating possible air and water quality impacts to react more effectively to future proposals for transportation corridors and commercial development within or adjacent to the monument's boundaries.

The reservation of instream flow water rights, by use of the State of Alaska's procedure, if undertaken for selected streams within Cape Krusenstern, would assure water quantities which would continue to support

existing levels of aquatic habitat, fish populations, recreation, and subsistence uses.

The development of contingency measures in cooperation with other federal and state agencies for oil spills affecting water within and adjacent to the monument would enable the National Park Service to respond to toxic spills which could adversely affect fish and marine mammals. The proposed cleanup of the abandoned military site in the Kakagrak Hills would result in the removal of scattered debris and petroleum drums which could safeguard water quality, wildlife and vegetation in the area.

Development of an information and interpretive program, as well as expanded visitor facilities in Kotzebue, would help foster a greater understanding and appreciation for the monument's resources by visitors and local residents. Through these education efforts a better understanding of the impacts of subsistence and recreational activities on natural systems could be conveyed and thus reduce the potential for negative impacts on these resources.

Contact with visitors prior to their departure for the monument would enable park staff to direct recreation users away from sensitive wildlife zones, bear problem areas, or other areas of concern. The result could be a decrease in disturbance to wildlife at sensitive times and locations.

The marking of the monument's boundaries at key access points would serve to alert all users that they are entering the monument wherein regulations governing the taking of fish and wildlife for sport and subsistence purposes (as well as other federal and state laws) are enforced by the National Park Service.

The proposal to show private lands in a brochure of the monument would provide a degree of protection to owners of these lands against trespass, and the unsanctioned taking of trees, wildlife, and other resources within the monument. This would be especially beneficial to private land owners between Cape Krusenstern and Sheshalik Spit where a large number of private tracts are concentrated.

Voluntary compliance with the recommended aircraft minimum altitude of 2,000 feet when practicable would reduce some disturbance to natural wildlife movements and the potential for some adverse impact upon migratory patterns, range utilization and reproductive success.

It is unknown at this time whether new construction would be undertaken for the visitor center, administrative offices, and the shop/storage facility, or if through a purchase or long-term lease arrangement existing structures in Kotzebue can be used to meet these needs. Assuming all new construction is required, a maximum of approximately 4.5 acres of vegetation and soils could be impacted for administrative offices (3,000 square feet each), visitor use facility (1,500 square feet), airplane hanger facility (7,000 square feet), and staff housing (one four-plex or approximately 5,000 square feet). Of this 4.5 acres, approximately 2.5 would be impacted by direct vegetation removal and another 2.0 by adjacent trampling and circulation. Approximately 0.5 acre would be impacted by the construction of an airplane hangar facility including a float plane dock and 4,000 square feet of paving. Vegetation removal at Kotzebue would affect wet tundra species and a variety of salt-tolerant species including grasses and sedges. The construction of a float plane docking facility would displace minor and insignificant numbers of benthic organisms and aquatic vegetation including woodrush, eelgrass, brackish water plankton and algal forms.

Minor and temporary increases in both air and noise pollution would be anticipated with construction activities in Kotzebue from combustion engines and other heavy machinery. Detours of local traffic could be anticipated to occur occasionally near construction sites during periods of high activity.

Construction of facilities within the monument and their use by park staff and the public are not anticipated to have significant impacts upon vegetation, mammals, fisheries, bird populations, or other natural resources of the monument. The construction of a ranger station in the southern half of the monument, possibly near the mouth of the Tukrok River, would not affect significant additional vegetation or soils beyond that being affected by the existing tent facility (less than one half acre). The present location provides sheltered anchorage for a small boat, fresh water, and access to various sites along the coastline. The existing plywood tent platform foundation could likely be used for a cabin foundation with only minor modification. Construction of a ranger station along the northern coast of the monument, at or near the proposed Red Dog port site, is not expected to impact more than one half acre of soils, vegetation, and wildlife habitat. The proposed station on the northern coast and associated operations would be designed specifically to monitor use levels associated with the proposed Red Dog Mine



facilities. Hydrology and wetland impacts would be avoided by careful site choice. Placement of a ranger at both locations within the monument would facilitate greater resource protection through the dissemination of information and regular patrolling.

Establishment of permanent bases of operation at these locations would result in the areas becoming the focus of long-term use patterns within the monument. Such patterns would include regular visits by National Park Service personnel in airplanes, motorboats, and snowmachines. Knowledge that the National Park Service personnel would be operating out of these locations would attract monument visitors and conceivably, in the north some industrial related traffic, in need of assistance and information or simply because of curiosity. This concentration of activity could result in trail formation within the immediate vicinity of the facilities (i.e., less than one-half mile radius). This could be mitigated by using wooden or metal walkways for access to and from the ranger stations and caches. Adverse impacts resulting from the addition of these facilities and operations to areas where none presently exist would also be mitigated by keeping the facilities to the minimum necessary (but usable in the winter) and only using the southern ranger station on a seasonal or intermittent basis. In addition, the proposed northern ranger station would enable the National Park Service to more effectively monitor use levels and impacts resulting from the proposed Red Dog Mine. These facilities are considered to be the minimum necessary to carry out the proposed plan.

The establishment of cooperative research efforts and agreements with other agencies with responsibilities within the region would serve to provide greater expertise in the resolution of issues and problems related to management of natural resources within the monument and in surrounding areas.

### Monument Uses

#### Subsistence

Development of an information and interpretive program, as well as visitor facilities in Kotzebue, would foster a greater understanding and appreciation of the monument's resources and the various uses of those resources for subsistence purposes. Increased opportunity for contact with visitors prior to their departure for the monument and in the field would enable park staff to direct recreational users away from sensitive wildlife zones and subsistence use areas. The



presence of a ranger in the southern half of the monument during the summer period would serve to lessen the potential for future conflicts between recreationists and subsistence users in sensitive areas where whitefish are harvested. The presence of a ranger in the northern half of the monument would serve to lessen the potential for future conflicts between the proposed Red Dog Mine and subsistence users. Compliance with the recommended aircraft minimum altitude of 2,000 feet would also minimize disturbance to subsistence activities associated with wildlife movements in the monument.

The reservation of instream flow water rights by use of the State of Alaska's procedures, if undertaken for selected streams within Cape Krusenstern, would assure water quantities which would continue to provide opportunities for subsistence.

The analysis of possible restrictions on subsistence uses required by Section 810 of ANILCA is contained in Appendix C.

#### Recreation

Development of an information and interpretive program; as well as visitor facilities in Kotzebue, would foster a greater understanding of and appreciation for the monument's resources, recreational opportunities, and hazards of traveling in the monument. Stationing of park staff in the monument during the primary season for visitors from outside the region would also make visitor safety and protection services more readily available. In the northern half of the monument the presence of a ranger station would serve to lessen the potential for future conflicts between recreational users and industrial use along the proposed Red Dog Mine Road corridor.

#### Commercial

If a concession permit system is implemented, the number of commercial operators could be limited. Qualified existing operators would be grandfathered in at the time the system went into effect, if they operated in the monument prior to January 1, 1979, are able to meet the needs of visitors and operate in a manner consistent with the purposes for which the monument was established. This would then limit additional new operations from offering commercial services in the monument.

## Monument Operations

The construction or lease of a new permanent visitor center and administrative facility at Kotzebue would rectify current space limitations and would permit the separation of conflicting uses. A shop and storage facility, additional staff housing, and a hangar facility, would enable staff to more effectively carry out their duties. It would also greatly enhance aircraft operations because heated facilities would allow aircraft to be launched without the 4 to 5 hours of pre-heating time now required in winter.

The current high cost and limited availability of rental housing in Kotzebue would make National Park Service staff housing attractive to new and low-salaried employees. This would help encourage staff to complete their tours of duty resulting in increased continuity of service by staff.

## Socioeconomic

New construction on a contractual basis or continued lease of the existing structures and or other structures utilized by the National Park Service in Kotzebue, would have positive impacts upon the local economy and potential local native corporation(s) if their lands are available for use or purchase. Use of local hires for staff positions for the monument would also have positive impacts upon the economy of Kotzebue and would provide cash income and some training opportunities for local residents.

## Conclusion:

The primary purposes of the actions in alternative 1 are to protect significant cultural and natural resources, to perpetuate natural systems, and to provide minor development facilities that enhance the effectiveness and efficiency of monument management. Additionally, visitor services, especially through interpretation, would lead toward a greater understanding of natural systems and subsistence users. In general, impacts resulting from the proposals of the preferred alternative would, in the coming years, have positive effects (e.g. better resource information, increased management capability, etc.) on the monument and its resources, on the visitor's experience, on the effectiveness of park programs, and on the socioeconomic base of the community of Kotzebue.

## IMPACTS OF ALTERNATIVE 2 (STATUS QUO ALTERNATIVE)

### Cultural Resources

Because activities under alternative two would be largely custodial no new impacts on cultural resources would result. The limited program to systematically identify and evaluate cultural resources for the entire monument would be undertaken in accord with existing National Park Service policies to support specific management goals and protect significant resources. All future actions that would affect significant cultural resources would conform to National Park Service management policies and would comply with the requirements of the National Historic Preservation Act, as amended.

### Natural Resources

In general, the impacts would be similar to those of the preferred alternative except there would be less knowledge of the natural systems and their use because the monument staff and operations levels would not be able to support an expanded research program. The lack of a comprehensive and systematic research program would allow resource impacts of a serious nature to continue before management became aware of problems. While specific resource impact studies might help to mitigate impacts, some damage would occur before management could take remedial action.

Without the capability of systematic and comprehensive scientific research there would be lost opportunities to gain natural resource data. This condition could lead to damaging resource impacts from management decisions made without adequate resource information.

### Monument Uses

#### Subsistence

Impacts on subsistence would be similar to those of the preferred alternative except there would be a potential for adverse impacts on subsistence resources because of the continuing lack of overall understanding of the natural systems. These potential impacts would be mitigated by resource monitoring programs and specific research studies on resources that are identified to have impacts. However, it is possible that even with resource monitoring, impacts like population declines or other resource deterioration might not be detected until they reach a more obvious or serious stage.

As only minimal visitor information in Kotzebue would be provided under this alternative, the likelihood of disturbance from recreational users would increase as visitor use increases.

### Recreation

The current level of visitor information would continue to be provided. Visitors planning trips to the monument would have only minimal information which could diminish opportunities to enjoy the monument and its resources. They might also jeopardize their safety in terms of not adequately understanding arctic travel conditions. They could also inadvertently interfere with subsistence activities leading to sociocultural conflicts. Similarly, they could interfere with industrial use resulting from the proposed Red Dog Mine.

### Commercial

There would be no potential limitations on the number of commercial operators.

### Monument Operations

Impacts would be basically similar to those described for the preferred alternative except that the potentially beneficial aspects of increased space and facilities would not result in this alternative.

### Socioeconomic

Impacts would be similar to those described for the preferred alternative except that the potential for construction and its spin-off impacts would not result in this alternative.

Conclusion: Actions proposed in alternative two are largely custodial. The possibility of adverse impacts on natural and cultural resources and subsistence uses (e.g., resource deterioration, disruption of users, etc.) going undetected until they reached an obvious stage would continue in this alternative.

### Impacts of the Proposed Red Dog Mine

The Title XI permit application currently being considered for the Red Dog Mine road, port site and storage facility is mentioned throughout the plan as it has implications for management of lands within the monument. The impacts upon cultural, natural and subsistence resources of the proposed facilities have been thoroughly documented in several sources.

These are referenced here for purposes of avoiding duplication.

- 1983        Environmental Base Line Studies Red Dog Project, Dames and Moore in association with Peterson, Braund, Gallagher and Hall.
- 1983        Supplemental to Environmental Base Line Studies Red Dog Project Dames and Moore in association with Peterson, Braund, Gallagher and Hall.
- 1984        An Evaluation of the Effects on Subsistence of a Proposed Land Trade in Cape Krusenstern National Monument, S.R. Braund, and D.C. Burnham, prepared for NANA Corporation, Anchorage, Alaska.
- 1984        Addendum to an Evaluation of the Effects on Subsistence of a Proposed Land Trade in Cape Krusenstern National Monument, U.S. Department of the Interior, National Park Service, Alaska Regional Office, Anchorage, Alaska.
- 1984        Cape Krusenstern National Monument Proposed Land Exchange Resource Evaluation, U.S. Department of the Interior, National Park Service, Anchorage, Alaska.
- 1984        Final Environmental Impact Statement, Red Dog Mine Project, Northwest Alaska, Environmental Protection Agency, etc.







## WILDERNESS SUITABILITY REVIEW



CHAPTER 7  
WILDERNESS SUITABILITY REVIEW

Mandates

Because no lands in the monument were designated as wilderness, section 1317(a) of ANILCA directs that a review of lands in the monument be made to determine the suitability or nonsuitability for preservation as wilderness.

Section 1317(b) specifies that "the Secretary shall conduct his review by December 2, 1985, and the President shall advise the United States Senate and House of Representatives of his recommendations, in accordance with the provisions of sections 3(c) and (d) of the Wilderness Act" by December 2, 1987. Actual recommendations whether to designate suitable areas as wilderness will be made following completion of the general management plan. An environmental impact statement will be prepared as part of the recommendation process.

The Wilderness Act of 1964 defines wilderness as follows:

A wilderness, in contrast with those areas where man and his own works dominate the landscape, is hereby recognized as an area where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain. An area of wilderness is further defined to mean in this Act an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions and which (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation; (3) has at least five thousand acres of land or is of sufficient size as to make practicable its preservation and use in an unimpaired condition; and (4) may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value.

## Wilderness Suitability Criteria

Wilderness suitability criteria were developed that reflect the definition of wilderness contained in the Wilderness Act and the provisions of ANILCA specific to wilderness areas in Alaska. These criteria were applied to all Federal lands in the monument to determine their suitability for designation. These criteria relate to the current land status and physical character of the land, appropriateness for management as wilderness, and state and local concerns with wilderness management. The actual recommendations will follow completion of the general management plan. For a particular tract of land to be determined suitable or not suitable for wilderness designation, it must meet all of the following criteria:

<u>Description of Land or Activity</u>		<u>Suitable for Wilderness</u>	<u>Not Suit- able for- Wilderness</u>
Land Status	Federal	X	
	Federal, under applica- tion or selection, unpatented cemetery and historic site.	X	
	Federal, tentatively approved or interimly conveyed for selection.		X
	Patented private land		X
	Private ownership (patent) of subsurface estate.		X
Mining	Minor past mining activities and dis- turbances.	X	
	Major past and present mining activities.		X
Roads and ATV trails	Unused, little used or unimproved roads or ATV trails.	X	
	Regularly used by motor vehicles and improved by mechanical means.		X



Airstrips	Unimproved or minimally improved and maintained by hand.	X	
	Improved and maintained.		X
Cabins	Uninhabited structures; hunter, hiker and patrol cabins.	X	
	Inhabited as a primary place of residence.		X
Size of Unit	Greater than 5,000 acres, adjacent to existing wilderness, or of a manageable size.	X	
	Less than 5,000 acres or of unmanageable size.		X

#### Wilderness Suitability Determination

Using these criteria, all of the federal lands within the monument have been determined suitable for wilderness designations based on their present undeveloped and unimpaired state. There are no major past or present mining developments, improved roads or ATV trails, maintained airstrips or inhabited cabins on federal lands.

The existing airstrip in the Kakagrak Hills was constructed before the monument was established. Since abandonment by the military, approximately 1,500 feet of the airstrip's 3,000 feet has fallen into disrepair. Only the usable 1,500 feet is proposed for continued use and will receive minimum maintenance. As such, the airstrip does not preclude the area's suitability for wilderness.

The monument's 659,807 acres more than meet the minimum size requirement for wilderness consideration. Most of the current activity (fishing camps, etc.) takes place on Native allotments and Native corporation lands. However, approximately 198,589 acres have been selected by Native corporations under terms of ANCSA and 9,800 acres under terms of the 1906 Native Allotment Act (43 USC Section 270) providing for native allotments of up to 160 acres each. The final status of these selections and allotments have not been resolved meaning that it is not certain at this time whether they will be ultimately transferred out of federal ownership. For purposes of this suitability review, all federal lands within the

monument are determined to be suitable for further wilderness consideration pending the final outcome of the land disposal processes.

All lands within the monument will be managed as wilderness until the President makes his recommendations to the Congress (as required by ANILCA).

Changes in land status occurring or likely to occur between now and when the recommendations are made to the President and the Congress will be reflected in those recommendations. A determination of suitability does not affect any pending selections or other prior existing land disposal actions. All wilderness recommendations and subsequent designations will be made subject to valid existing rights.


## WILDERNESS SUITABILITY


Cape Krusenstern  
National Monument


United States Department of the Interior  
National Park Service

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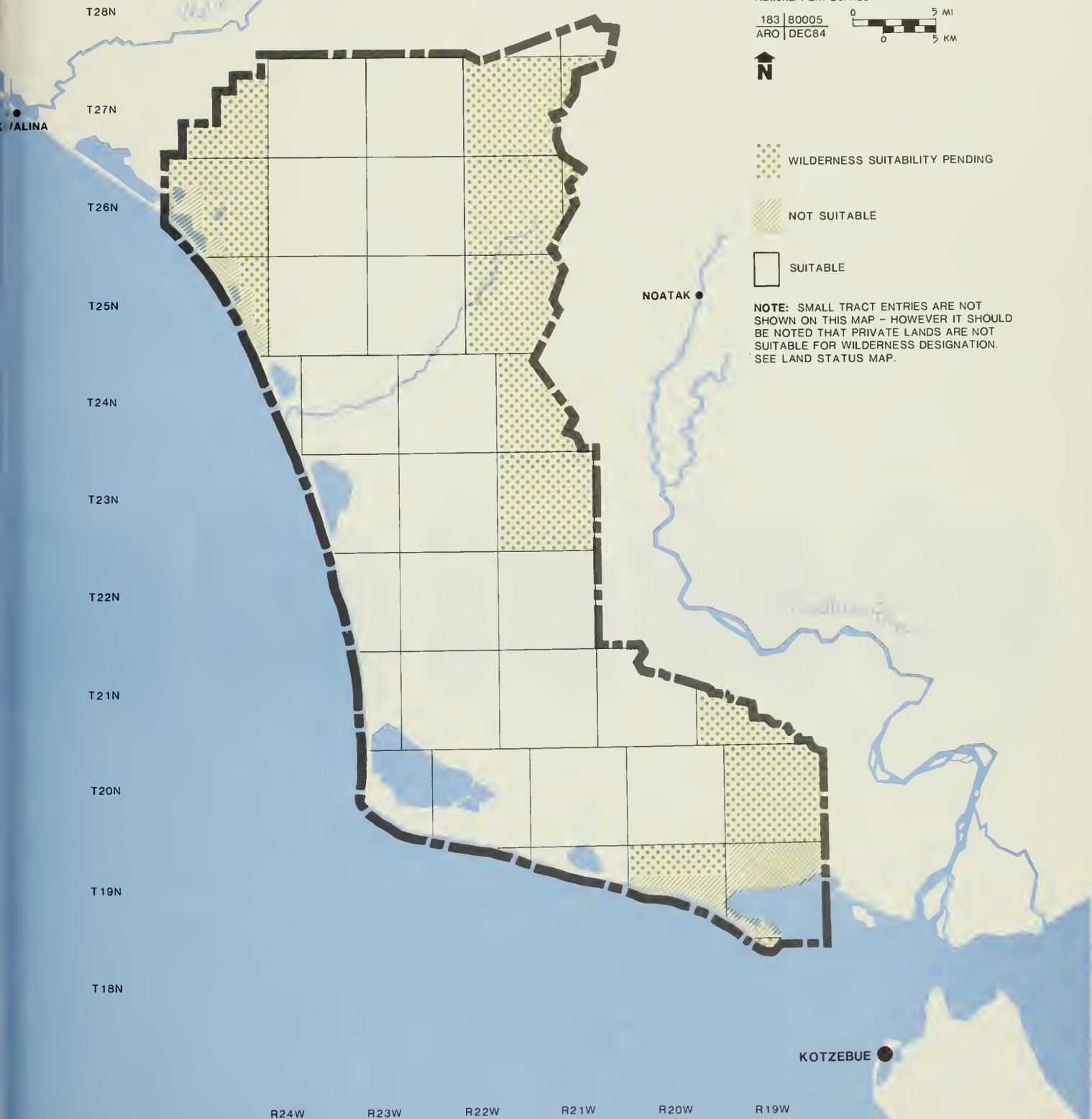


 WILDERNESS SUITABILITY PENDING

 NOT SUITABLE

 SUITABLE

**NOTE:** SMALL TRACT ENTRIES ARE NOT SHOWN ON THIS MAP - HOWEVER IT SHOULD BE NOTED THAT PRIVATE LANDS ARE NOT SUITABLE FOR WILDERNESS DESIGNATION. SEE LAND STATUS MAP.







## APPENDICES





## CHAPTER 8

### APPENDIX A

#### CONSISTENCY DETERMINATION FOR ALASKA COASTAL MANAGEMENT PROGRAM

The Coastal Zone Management Act of 1972, section 307(c) (PL 92-583) as amended, states that "each federal agency conducting or supporting activities directly affecting the coastal zone shall conduct or support those activities in a manner which is, to the maximum extent practicable, consistent with approved state coastal management programs."

The Alaska Coastal Management Act of 1977, as amended, and the subsequent Alaska Coastal Management Program (ACMP) and Final Environmental Impact Statement of 1979 set forth policy guidelines and standards used for review of this General Management Plan.

Separate consistency determinations related to the proposed Red Dog Mine have been prepared and are incorporated by reference into this determination. In its review of the Red Dog Mine Title 11 permit package, the State of Alaska on August 6, 1984, concurred that the proposal is consistent with the ACMP. The State reserved comment on the final recommended terms and conditions applicable to the National Park Service right-of-way permit until such time as terms and conditions of the permit are developed.

In its review of the land exchange the State of Alaska on December 6, 1984, did not concur with the determination of consistency. In its letter the state recommended amendments to the consistency determination. The National Park Service is responding to those concerns and fully expects to mutually resolve the matter and receive a concurrence from the state in the near future.

The ACMP identifies twelve primary categories that are to be used in consistency evaluations. The basis of the following consistency determination is the Environmental Assessment that accompanies this Draft General Management Plan for the monument. The highlights of this assessment are organized in the ACMP format in the consistency determination. This determination considers not only the elements of the draft proposed plan, but also the elements of alternative proposals in the draft plan which relate to coastal land and water uses.

The twelve categories in the ACMP and an indication of the parts which are applicable to this plan follow:

Coastal development	*
Geophysical hazard areas	*
Recreation	*
Energy facilities	
Transportation and utilities	
Fish and seafood processing	
Timber harvest and processing	
Mining and mineral processing	
Subsistence	*
Habitats	*
Air, land, and water quality	*
Historic, prehistoric, and archeological resources	*

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\* Applicable

The following matrix evaluates the consistency of the GMP alternatives with the requirements of each of the applicable categories identified.

## Consistency Determination Matrix

ACMP Section	Policy	Evaluation of Preferred and Other Alternatives	Consistency
6 AAC 80.040 Coastal Development	<p>(a) In planning for and approving development in coastal areas, districts and state agencies shall give, in the following order, priority to:</p> <ol style="list-style-type: none"> <li>1) water dependent uses and activities;</li> <li>2) water related uses and activities;</li> <li>3) uses and activities which are neither water dependent nor water related for which there is no feasible and prudent inland alternative to meet the public need for the use or activity.</li> </ol> <p>(b) The placement of structures and the discharge of dredged or fill material into coastal water must, at a minimum, comply with CFR, Title 33, Parts 320-323, July 19,1977.</p>	<p>(a) Both of the alternatives emphasize little development in the monument. Developments would be water dependent or water related and would take place along the beaches and lagoons of the monument. In both alternatives a seasonal ranger station would be located in the southern half of the monument at an undetermined location. This would be a small-scale facility and consist of one to two structures with necessary support facilities. A permanent ranger station with one to three structures would be located in the northern half of the monument in conjunction with the Red Dog Mine, if developed.</p> <p>(b) Neither of the alternatives propose discharging any dredged or fill material into coastal waters.</p>	Consistent
6 AAC 80.050 Geophysical Hazard Areas	<p>(a) Districts and state agencies shall identify known geophysical hazard areas and areas of high development potential in which there is a substantial possibility that geophysical hazards may occur.</p>	Neither of the alternatives propose developments in any known geophysical hazard area.	Consistent

(b) Development in areas identified under (a) of this section may not be approved by the appropriate state or local authority until siting, design, and construction measures for minimizing property damage and protecting against loss of life have been provided.

6 AAC 80.060  
Recreation

- (a) Districts shall designate areas for recreational use. Criteria for designation of areas of recreational use are:
- (1) the area receives significant use by persons engaging in recreational pursuits or is a major tourist destination; or
  - (2) the area has potential for high quality recreational use because of physical, biological, or cultural features.

8-16

(a) Both of the alternatives recognize and would protect the monument's potential for high quality recreational opportunities related to its physical, biological, and cultural features.

Consistent

- (b) District and state agencies shall give high priority to maintaining and, where appropriate, increasing public access to coastal water.

(b) The establishment of the monument guarantees and provides for public access to federal lands adjoining coastal waters.

Consistent

6 AAC 80.120  
Subsistence

- (a) Districts and state agencies shall recognize and assure opportunities for subsistence usage of coastal areas and resources.

See Appendix C of the draft GMP: "ANILCA Section 810 Subsistence Evaluation". This evaluation finds that neither of the alternatives would result in a significant restriction of subsistence uses within the monument.

Consistent



(b) Districts shall identify areas in which subsistence is the dominant use of coastal resources.

(c) Districts may, after consultation with appropriate state agencies, native corporations, and any other persons or groups, designate areas identified under (b) of this section as subsistence uses and activities have priority over all non-subsistence uses and activities.

(d) Before a potentially conflicting use of activities may be authorized within areas designated under (c) of this section, a study of the possible adverse impacts of the proposed potentially conflicting use or activity upon subsistence usage must be conducted and appropriate safeguards to assure subsistence usage must be provided.

(e) Districts sharing migratory fish and game resources must submit compatible plans for habitat management.

60 AAC 80.130  
Habitats

(a) Habitats in the coastal area which are subject to the Alaska Coastal Management Program include:  
(1) offshore areas;  
(2) estuaries;  
(3) wetlands and tidelands;  
(4) rocky islands and seacliffs;  
(5) barrier islands and lagoons;  
(6) exposed high energy coasts;

Both of the alternatives would serve to maintain the integrity and biological health of coastal habitats by promoting research and monitoring programs.

Consistent

(7) rivers, streams, and lakes; and  
(8) important upland habitat.

(b) The habitats contained in (a) of this section must be managed so as to maintain or enhance the biological, physical, and chemical characteristics of the habitat which contribute to its capacity to support living resources.

6 AAC 80.140  
Air, Land,  
and Water  
Quality

The statutes pertaining to and the regulations and procedures of the Alaska Department of Environmental Conservation with respect to the protection of air, land, and water quality are incorporated into the ACMP.

All requirements would be met under both of the alternatives. Development of any facilities would require compliance with applicable federal and state laws and regulations regarding air, land and water quality.

Consistent

∞  
1  
∞

6 AC 80.150  
Historic,  
Prehistoric,  
and Archeo-  
logical  
Resources

Districts and appropriate state agencies shall identify areas of the coast which are important to the study, understanding, or illustration of national, state or local history or prehistory.

In both alternatives, the National Park Service would survey, evaluate and protect archeological and historical sites within the monument as mandated by laws and regulations.

Consistent

#### DETERMINATION

The Draft General Management Plan for Cape Krusenstern National Monument has been evaluated for consistency with the standards of the Alaska Coastal Management Program. It has been determined by the National Park Service that the proposed plan conforms with all the requirements of the Alaska Coastal Management Program.

APPENDIX B

(copy)

MASTER MEMORANDUM OF UNDERSTANDING  
BETWEEN  
THE ALASKA DEPARTMENT OF FISH AND GAME  
JUNEAU, ALASKA  
AND  
THE U.S. NATIONAL PARK SERVICE  
DEPARTMENT OF THE INTERIOR  
ANCHORAGE, ALASKA

This Master Memorandum of Understanding between the State of Alaska, Department of Fish and Game, hereinafter referred to as the Department and the U.S. Department of the Interior, National Park Service, hereinafter referred to as the Service, reflects the general policy guidelines within which the two agencies agree to operate.

WHEREAS, the Department, under the Constitution, laws, and regulations of the State of Alaska, is responsible for the management, protection, maintenance, enhancement, rehabilitation, and extension of the fish and wildlife resources of the State on the sustained yield principle, subject to preferences among beneficial uses; and

WHEREAS, the Service, by authority of the Constitution, laws of Congress, executive orders, and regulations of the U.S. Department of the Interior is responsible for the management of Service lands in Alaska and the conservation of resources on these lands, including conservation of healthy populations of fish and wildlife within National Preserves and natural and healthy populations within National Parks and Monuments; and

WHEREAS, the Department and the Service share a mutual concern for fish and wildlife resources and their habitats and desire to develop and maintain a cooperative relationship which will be in the best interests of both parties, the fish and wildlife resources and their habitats, and produce the greatest public benefit; and

WHEREAS, the Alaska National Interest Lands Conservation Act (ANILCA) and subsequent implementing Federal regulations recognize that the resources and uses of Service lands in Alaska are substantially different than those of similar lands in other states and mandate continued subsistence uses in designated National Parks, plus sport hunting and fishing, subsistence, and trapping uses in National Preserves under applicable

State and Federal laws and regulations; and

WHEREAS, the Department and the Service recognize the increasing need to coordinate resource planning and policy development;

NOW, THEREFORE, the parties hereto do hereby agree as follows:

THE DEPARTMENT OF FISH AND GAME AGREES:

1. To recognize the Service's responsibility to conserve fish and wildlife and their habitat and regulate the human use on Service lands in Alaska, in accordance with the National Park Service Organic Act, ANILCA, and other applicable laws.
2. To manage fish and resident wildlife populations in their natural species diversity on Service lands, recognizing that nonconsumptive use and appreciation by the visiting public is a primary use and appreciation by the visiting public is a primary consideration.
3. To consult with the Regional Director or his representative in a timely manner and comply with applicable Federal laws and regulations before embarking on management activities on Service lands.
4. To act as the primary agency responsible for management of subsistence uses of fish and wildlife on State and Service lands, pursuant to applicable State and Federal laws.
5. To recognize that National Park areas were established, in part, to "assure continuation of the natural process of biological succession" and "to maintain the environmental integrity of the natural features found in them."

THE NATIONAL PARK SERVICE AGREES:

1. To recognize the Department as the agency with the primary responsibility to manage fish and resident wildlife within the State of Alaska.
2. To recognize the right of the Department to enter onto Service lands after timely notification to conduct routine management activities which do not involve construction, disturbance to the land, or alterations of ecosystems.

3. To manage the fish and wildlife habitat on Service lands so as to ensure conservation of fish and wildlife populations and their habitats in their natural diversity.
4. To cooperate with the Department in planning for management activities on Service lands which require permits, environmental assessments, compatibility assessments, or similar regulatory documents by responding to the Department in a timely manner.
5. To consider carefully the impact on the State of Alaska of proposed treaties or international agreements relating to fish and wildlife resources which could diminish the jurisdictional authority of the State, and to consult freely with the State when such treaties or agreements have a significant impact on the State.
6. To review Service policies in consultation with the Department to determine if modified or special policies are needed for Alaska.
7. To adopt Park and Preserve management plans whose provisions are in substantial agreement with the Department's fish and wildlife management plans, unless such plans are determined formally to be incompatible with the purposes for which the respective Parks and Preserves were established.
8. To utilize the State's regulatory process to the maximum extent allowed by Federal law in developing new or modifying existing Federal regulations or proposing changes in existing State regulations governing or affecting the taking of fish and wildlife on Service lands in Alaska.
9. To recognize the Department as the primary agency responsible for policy development and management direction relating to subsistence uses of fish and wildlife resources on State and Service lands, pursuant to applicable State and Federal laws.
10. To consult and cooperate with the Department in the design and conduct of Service research or management studies pertaining to fish and wildlife.
11. To consult with the Department prior to entering into any cooperative land management agreements.
12. To allow under special use permit the erection and maintenance of facilities or structures needed to further fish and wildlife management activities of



the Department on Service lands, provided their intended use is not in conflict with the purposes for which affected Parks or Preserves were established.

THE DEPARTMENT OF FISH AND GAME AND THE NATIONAL PARK SERVICE MUTUALLY AGREE:

1. To coordinate planning for management of fish and wildlife resources on Service lands so that conflicts arising from differing legal mandates, objectives, and policies either do not arise or are minimized.
2. To consult with each other when developing policy, legislation, and regulations which affect the attainment of wildlife resource management goals and objectives of the other agency.
3. To provide to each other upon request fish and wildlife data, information, and recommendations for consideration in the formulation of policies, plans, and management programs regarding fish and wildlife resources on Service lands.
4. To recognize that the taking of fish and wildlife by hunting, trapping, or fishing on certain Service lands in Alaska is authorized in accordance with applicable State and Federal law unless State regulations are found to be incompatible with documented Park or Preserve goals, objectives or management plans.
5. To recognize for maintenance, rehabilitation, and enhancement purposes, that under extraordinary circumstances the manipulation of habitat or animal populations may be an important tool of fish and wildlife management to be used cooperatively on Service lands and waters in Alaska by the Service or the Department when judged by the Service, on a case by case basis, to be consistent with applicable law and Park Service policy.
6. That implementation by the Secretary of the Interior of subsistence program recommendations developed by Park and Park Monument Subsistence Resource Commissions pursuant to ANILCA Section 808(b) will take into account existing State regulations and will use the State's regulatory process as the primary means of developing Park subsistence use regulations.

7. To neither make, nor sanction any introduction or transplant any fish or wildlife species on Service lands without first consulting with the other party and complying with applicable Federal and State laws and regulations.
8. To cooperate in the development of fire management plans which may include establishment of priorities for the control of wildfires and use of prescribed fires.
9. To consult on studies for additional wilderness designations and in development of regulations for management of wilderness areas on Service lands.
10. To resolve, at field office levels, all disagreements pertaining to the cooperative work of the two agencies which arise in the field and to refer all matters of disagreement that cannot be resolved at equivalent field levels to the Regional Director and to the Commissioner for resolution before either agency expresses its position in public.
11. To meet annually to discuss matters relating to the management of fish and wildlife resources on, or affected by, Service lands.
12. To develop such supplemental memoranda of understanding between the Commissioner and the Regional Director as may be required to implement the policies contained herein.
13. That the Master Memorandum of Understanding is subject to the availability of appropriated State and Federal funds.
14. That this Master Memorandum of Understanding establishes procedural guidelines by which the parties shall cooperate, but does not create legally enforceable obligations or rights.
15. That this Master Memorandum of Understanding shall become effective when signed by the Commissioner of the Alaska Department of Fish and Game and the Alaska Regional Director of the National Park Service and shall continue in force until terminated by either party by providing notice in writing 120 days in advance of the intended date of termination.
16. That amendments to this Master Memorandum of Understanding may be proposed by either party and

shall become effective upon approval by both parties.

STATE OF ALASKA  
Department of Fish and Game

U.S. DEPARTMENT OF THE INTERIOR  
National Park Service

By /s/ Ronald O. Skoog  
Ronald O. Skoog  
Commissioner

By /s/ John E. Cook  
John E. Cook  
Regional Director, Alaska

Date 14 October 1982

Date October 5, 1982

## APPENDIX C

### SECTION 810 EVALUATION CAPE KRUSENSTERN NATIONAL MONUMENT

#### I. INTRODUCTION

Section 810(a) of ANILCA states:

In determining whether to withdraw, reserve, lease, or otherwise permit the use, occupancy, or disposition of public lands under any provision of law authorizing such actions, the head of the Federal agency having primary jurisdiction over such lands or his designee shall evaluate the effect of such use, occupancy, or disposition of public lands needed for subsistence purposes. No such withdrawal, reservation, lease, permit, or other use, occupancy or disposition of such lands which would significantly restrict subsistence uses shall be effected until the head of such Federal agency-

(1) gives notice to the appropriate State agency and the appropriate local committees and regional councils established pursuant to section 805;

(2) gives notice of, and holds, a hearing in the vicinity of the area involved; and

(3) determines that (A) such a significant restriction of subsistence uses is necessary, consistent with sound management principles for the utilization of the public lands, (B) the proposed activity will involve the minimal amount of public lands necessary to accomplish the purposes of such use, occupancy, or other disposition, and (C) reasonable steps will be taken to minimize adverse impacts upon subsistence uses and resources resulting from such actions.

The purposes for which the monument was established and how it shall be managed are presented in ANILCA Sec. 201(3) (see Chapter 1). Subsistence uses are to be permitted in conservation system units in accordance with Title VIII of ANILCA.

#### II. EVALUATION CRITERIA

The potential for significant restriction must be evaluated for effects of the proposed action and alternatives upon "...subsistence uses and needs, the availability of other lands for the purposes sought to

be achieved and other alternatives which would reduce or eliminate the use." Restriction on subsistence use would be significant if there were large reductions in the abundance of harvestable resources, major redistributions of those resources or substantial interference with harvester access to active subsistence sites.

After evaluating the proposals and recommendations in the Draft General Management Plan for Cape Krusenstern National Monument against the criteria an evaluation of significance to subsistence activities can be made.

1. Whether:

- (a) there is likely to be a reduction in subsistence uses due to factors such as direct impacts on the resource, adverse impacts on habitat, or increased competition from non-rural harvesters.
- (b) there is likely to be a reduction in subsistence uses due to changes in availability of resources caused by an alteration in their distribution, migration, or location.
- (c) there is likely to be a reduction in subsistence uses due to limitations on the access to harvestable resources, such as by physical or legal barriers.

2. The availability of other lands that could be used for the proposed action, including an analysis of existing subsistence uses of those lands; and

3. Alternatives that would reduce or eliminate the proposed action from lands needed for subsistence purposes.

### III. PROPOSED ACTION ON FEDERAL LANDS

The National Park Service is proposing to implement a general management plan for Cape Krusenstern National Monument which would guide management of the area for the next 5-10 years. The plan presents proposals for the management of natural resources, cultural resources, visitor use and development, subsistence, and administration.

### IV. ALTERNATIVES CONSIDERED

- 1. Alternative 1 (Preferred Alternative)
- 2. Alternative 2 (Status Quo)



## V. AFFECTED ENVIRONMENT

As described in the Subsistence Use section in Chapter 2, the monument is part of a much broader area used by local residents for subsistence activities. While a few activities are relatively specific to the monument, most subsistence pursuits take place throughout a broad area without regard to political boundaries. Primary users of the monument are Inupaiq Eskimos who reside in the villages of Kivilina, Noatak, Kotzebue, and Sheshalik, a small settlement developing on native owned lands at Sheshalik Spit. All use the monument at various times for hunting, fishing, trapping, and gathering. Wood taken from the beaches and from the limited stands of spruce in the monument provide fuel for heating homes during the long cold winters.

## VI. EVALUATION

In the determination of potential restrictions on existing subsistence activities, the evaluation criteria were analyzed relative to existing subsistence resources which could be impacted. The draft general management plan and environmental assessment describe the total range of potential impacts which may occur. This section discusses any possible restrictions to subsistence activities.

### 1. (a) The Potential to Reduce Populations, Adversely Impact Habitat, or Increase Competition from Non-rural Harvesters

No significant declines in populations would result from implementation of either of the alternatives. The National Park Service would continue to manage fish and wildlife species consistent with ANILCA the Master Memorandum of Understanding with Alaska Department of Fish and Game and National Park Service policies. (See appendix B)

Under alternative 2, the possibility for adverse impacts on habitat is greater than under the preferred alternative because there would not be a comprehensive approach to researching and monitoring the monument's resources including those habitats important to subsistence uses. Adverse impacts on habitat could go undetected until they reached a more serious or obvious stage. The likelihood of this happening is not considered significant in view of the minimal changes in resource conditions and uses expected over the next 10 years.

Neither alternative has the potential for increasing competition from non-rural harvesters because sport hunting is not allowed in a national monument. Sport fishing is not expected to increase because there are no resources within the monument that are considered potentially attractive to sport fishermen.

Conclusion: Neither of the alternatives would result in a reduction in the population of any harvestable resource, significantly impact habitat, or increase competition from non-rural harvesters.

(b) Availability of Subsistence Resources

The distribution, migration patterns, and location of subsistence resources are expected to remain essentially as is under either of the alternatives.

Conclusion: Neither of the alternatives would result in significant changes in the availability of resources caused by an alteration in their distribution, migration, or location.

(c) Restriction of Access

Under both alternatives, access to the monument for subsistence purposes is guaranteed by Section 811 of ANILCA. Regulations implementing Section 811 are already in place, and neither of the alternatives proposes changes in those regulations.

Conclusion: Neither of the alternatives would result in limitations on access to harvestable resources.

2. Availability of Other Lands for the Proposed Action

There are no other lands available for this action because the monument boundaries were established by Congress to achieve specific purposes. There are, however, lands outside the monument which are available for subsistence uses. The proposed plan is consistent with the mandates of ANILCA and the National Park Service Organic Act.

3. Alternatives

No alternatives that would reduce or eliminate the proposed actions from lands needed for subsistence

purposes were identified because preparation of a general management plan is required by ANILCA and the proposed plan is consistent with provisions of ANILCA related to subsistence. In addition, it is possible for subsistence users to utilize other lands outside the monument, and they do. Subsistence users utilize the lands most easily accessible that can provide for their needs and extend their activities to other areas on an "as needed" basis.

## VII. CONSULTATION AND COORDINATION

The Alaska Department of Fish and Game and the NANA Coastal Resources Service Area were consulted throughout preparation of this plan. Further information is contained in the consultation and coordination section of the plan, Chapter 10.

## VIII. FINDINGS

Based upon the evaluation process the National Park Service concludes that the proposed plan would not result in significant restrictions of subsistence uses within Cape Krusenstern National Monument.

## APPENDIX D

### COMPLIANCE WITH OTHER LAWS, POLICIES and EXECUTIVE ORDERS

This appendix provides a reference to applicable laws, executive orders, and policies that should be complied with in the General Management Plan for Cape Krusenstern National Monument. In many cases compliance has already been discussed in the "Environmental Consequences" section, in Chapter 6. The information is repeated here only to provide a comprehensive compliance discussion.

#### Natural Environment

Clean Air Act, Clean Water Act: None of the proposed actions would affect air or water quality within the monument. All National Park Service facilities would meet or exceed standards and regulations for proper waste disposal established by the Environmental Protection Agency and the Alaska Department of Environmental Conservation.

Rivers and Harbors Act: Any permits required from the U.S. Army Corps of Engineers for work in navigable waters of the United States would be obtained.

Executive Orders 11988 (Floodplain Management) and 11990 (Protection of Wetlands): Since no floodplain mapping exists for the monument, the National Park Service would assume worst-case conditions for placement of facilities. Development of any new facilities would be preceded by site-specific analyses. No proposal would affect wetlands within the monument.

Since there is little or no human habitation along the rivers in the monument, the Corps of Engineers does not consider floodplain mapping within the preserve a high priority in Alaska.

Prime and Unique Agricultural Lands: No arable lands have been identified within the monument.

Safe Drinking Water Act: The plan does not propose to provide any public drinking water within the monument.

Endangered Species Act: Pursuant to section 7 of the Endangered Species Act, the U.S. Fish and Wildlife Service was contacted in March 1984 for a list of threatened and endangered plant and animal species which might occur within the monument. In their response of March 28, 1984, the Fish and Wildlife Service stated that nesting by Arctic peregrine falcons has been reported within the southern half of the monument.

Although the total extent of nesting is unclear, the area is not considered to be one of the more important peregrine nesting areas. Additionally, Comineo Alaska Inc. consultants have, in their environmental studies for the proposed Red Dog Mine, noted the existence of arctic peregrine falcons near to the northern boundary of the monument.

As required by law further consultation with the U.S. Fish and Wildlife Service, will continue.

Protection of Waters Important to Anadromous Fish (Alaska Statutes Title 16): Before undertaking any development or action that could have an effect on spawning and rearing habitat for anadromous fish in designated streams, the National Park Service would request a Title 16 permit from the Alaska Department of Fish and Game.

Hunting, Trapping, and Fishing: These uses, whether for sport or subsistence, are subject to state regulations. The National Park Service has by reference adopted state regulations so that concurrent enforcement can occur within the monument.

Alaska Coastal Management Program: A consistency determination has been prepared pursuant to the Alaska Coastal Management Act of 1977, as amended (see appendix A). Based on the findings of the consistency determination, the National Park Service has determined that the preferred alternative alternative 1 and alternative 2 are consistent with the Alaska Coastal Management Program.

Marine Protection Research and Sanctuaries Act, Estuary Protection Act, Marine Mammal Protection Act: Projected visitor use levels and forms of human activity within the monument are not expected to significantly impact ecological systems, marine environments, or human health. Proposed actions comply with the Marine Protection Research and Sanctuaries Act of 1972 (16 USC 1451 et seq.). Proposals would not impact estuarine resources or marine mammal populations and are in compliance with the protection and conservation tenets as provided in the Estuary Protection Act (16 USC 1221) and the Marine Mammal Protection Act (16 USC 1361 et. seq.).

#### Cultural Resources

Antiquities Act, Historic Sites Act, National Historic Preservation Act, Archeological Resources Protection Act: All actions will be in full compliance with appropriate cultural resource laws. All proposals and



activities affecting or relating to cultural resources will be developed and executed with the active participation of professional archeologists, historians, anthropologists, and historical architects, in accordance with National Park Service "Management Policies" and "Cultural Resource Management Guidelines" (National Park Service-28). No undertaking that would result in the destruction or loss of known significant cultural resources is proposed in this plan.

In accordance with the September 1981 amendment to the 1979 programmatic memorandum of agreement between the National Park Service, the Advisory Council on Historic Preservation, and the National Council of State Historic Preservation Officers, the National Park Service requested the advice and consultation of the Advisory Council and the Alaska State Historic Preservation Officer during the preparation of this plan. A meeting was held in Anchorage in April 1984 with the Alaska State Historic Preservation Officer to discuss coordination and consultation procedures for this plan. A second session, in November 1984, was also held at which time a status report was given to the State Historic Preservation officer. The Advisory Council was provided a copy of the task directive for this plan. The advice and consultation of these offices will continue to be requested as the plan progresses. The council and the State Historic Preservation Officer have received copies of the draft plan for comment and will be invited to attend all future public meetings.

1982 National Park Service Native American Relationships Policy: A thorough effort has been made to identify all native corporations and local native American groups and individuals who would be interested in participating in this planning effort and who have traditional ties with the monument. The planning team has met with representatives of these groups at various stages of the plan's development. These individuals and groups have been placed on the mailing list and will continue to be consulted, invited to all public meetings, and sent copies of all public information documents for review and comment.

#### Socioeconomic Environment

Concessions Policy Act: If the level of use within the monument increases to the point where commercial use licensees are replaced by concession permits, the concession permits or contracts would be issued in accordance with this act.

Architectural Barriers Act: All public facilities in the monument and those located in Kotzebue will to the extent possible be accessible to the handicapped.

## APPENDIX E

### MANAGEMENT OBJECTIVES CAPE KRUSENSTERN NATIONAL MONUMENT

#### Cultural Resources:

1. For the purposes of the protection of cultural resources, identify and evaluate the monument's prehistorical, historical and archeological, resources in a manner consistent with National Park Service policy and legislative and executive requirements.
2. Work toward the establishment of programs for the collection of information and data about the historical and cultural resources so that they are properly managed and preserved.
3. Devise plans so that public visitation, research, commercial fishing, mining, subsistence uses and other activities do not impair cultural resources or their setting.
4. Assemble cultural resources information -- including oral and written materials -- to be used in interpretive programs for the enjoyment and education of visitors.
5. Encourage and assist private landowners within the monument and individuals, groups, and Native corporations in surrounding communities to protect and preserve cultural resources and the cultural heritage of the the region.
6. In accordance with the provisions of Section 1304 of ANILCA, devise a plan for identifying significant archeological and palentological sites that are closely associated with, and might be added to, the monument but are presently outside the monument's boundary.
7. Prepare a Scope of Collections Statement to serve as a guide for the staff of the monument to acquire museum objects.
8. Encourage and support research activities by professionally qualified individuals, groups, and institutions for the identification and evaluation of further cultural resources within the monument and region.

9. Devise programs for compiling information on the cultural patterns -- including current subsistence activities -- of contemporary Eskimos in the region.

#### Natural Resources:

1. Manage natural resources to perpetuate ecological processes and systems.
2. Collect information and data about the fluctuating population cycles of certain wildlife and their impacts so that managers of the monument have a basis for making decisions that will allow natural forces to interact as freely as possible and thereby determine the shapes and substances of the environment.
3. Consider man -- particularly the subsistence user -- an integral part of the monument's total ecosystem and encourage his living in harmony with the other parts so as to maintain natural balances.
4. Develop and implement plans to provide for the adequate protection of natural wildlife and their habitats and at the same time accommodate subsistence hunting, trapping, fishing, and gathering as provided by ANILCA.
5. Preserve natural features and ecological relationships essential for the perpetuation of representative natural biotic communities in this arctic environment.
6. Encourage and assist private land owners and users of monument resources to protect the natural features of the area.
7. Annually update the Resources Management Plan to determine projects and studies necessary to provide information and data needed for the protection of natural resources.

#### Visitor Use and Interpretation:

1. Study and inventory recreational resources as a basis for providing visitors with informational materials, programs, and services to enhance their opportunities for enjoyable, educational, and safe ways to see and experience the cultural and natural resources without adversely impacting them.
2. Devise plans in accordance with the provisions of ANILCA to accommodate subsistence users, guided by management's concerns about and responsibilities to

maintain the quality of wildlife habitat and natural and healthy populations of wildlife.

3. Provide information services and interpretive programs at the headquarters in Kotzebue to enhance visitor opportunities to understand, appreciate, and enjoy resources of the monument. Specifically these services and programs would focus on the interaction of natural processes and the development of Eskimo culture; geological phenomena such as the beach ridges, Cape Krusenstern, and glacial and permafrost features; archeological discoveries and the potential for more; and the role of subsistence activities in the ecosystem.

#### Visitor Protection and Safety:

1. Devise procedures and programs to inform the public about the inherent dangers in this arctic environment and develop safety measures for the purpose of preventing injuries to visitors.
2. Employ and develop a staff of well trained, well-equipped field personnel to operate effectively in emergencies in both matters of search and rescue and law enforcement.
3. Devise procedures for providing visitors with such safety measures as reports of weather and other conditions, information about visitor contact points and possible shelters, emergency message systems, and that subsistence activities occur in the monument.
4. Work toward accomplishing cooperative agreements with qualified groups or individuals for the purpose of establishing procedures that will provide visitors with maximum protection and safety.

#### Development of Facilities:

1. Study the feasibility of and need for development of public contact points and or ranger stations to facilitate management and operations and provide for visitor services.
2. Should development be feasible and necessary, undertake projects that blend into the natural and cultural setting and use equipment and materials that conserve energy and other resources and protect the environment.
3. Observe and collect data on visitor uses for the purposes of determining the feasibility of and need



for constructing primitive camp sites, primitive shelters, and access points.

4. Elicit the cooperation of private land owners in the monument to undertake construction and development that recognize and respect the natural and cultural integrity of the monument and the needs of visitors, and encourage as much as possible that visitor accommodations and bases of operations be developed outside the monument boundary.

#### Concessions:

1. Identify appropriate levels and types of commercial services feasible for providing visitor services and issue concessions contracts, permits, and commercial use licenses as appropriate to those best able to meet the needs of visitors and protect resources as provided for in ANILCA.
2. Establish programs to collect data on public use and needs and make this information available to potential concessioners so that accommodations and services are the results of public needs and are compatible with proper management of monument resources.

#### Administration:

1. Provide adequate staff for visitor services and to perpetuate the resources of the monument.
2. Prepare and update planning documents to guide management in making appropriate administrative decisions.
3. Conduct, sponsor, and encourage continuing studies and other information-gathering methods focused on cultural and natural resources and visitor uses so that management has an increasing data base upon which to make decisions.
4. Locate sites when and where necessary for administrative efficiency, visitor contact interpretive services, patrol operations, conducting cooperative search and rescue missions, and cooperative resources management programs.
5. Study the feasibility of establishing management units or zones for the purpose of streamlining managerial responsibilities regarding visitor services and the use and perpetuation of resources.



6. Meet staffing objectives that take into account the knowledge and skills of cultural resources, local persons and the physical demands of working under severe environmental conditions.
7. Accomplish and keep current a regional fire management plan in cooperation with federal and state agencies and private land owners.
8. Accommodate legally mandated transportation systems in accordance with ANILCA and other applicable laws.

#### Cooperative Planning:

1. Develop cooperative management programs with managers of adjoining lands and waters and private land owners within the monument to protect viable populations of wildlife, biotic communities, and or associations and historical and cultural resources; arrive at a practical means for dealing with refuse and garbage disposal; develop essential services for the protection of human life and the resources of the area; and promote compatible and complementary uses of adjacent lands and waters.
2. Work toward arriving at cooperative agreements with Native groups and corporations, special interest groups, local governments, state and federal agencies, and the USSR in cultural and natural sciences research and programs.
3. Establish working agreements with private interests, local government and state and federal agencies for the purpose of developing feasible community and regional plans; and further to involve local Native residents and Native organizations in developing educational programs to inform visitors about Native culture and lifestyles.

## Appendix F

### ANILCA REQUIREMENTS

Section 1301 of the Alaska National Interest Lands Conservation Act (ANILCA: PL 96-487) requires the preparation of conservation and management plans for each unit of the national park system established or enlarged by ANILCA. These plans are to describe programs and methods for managing resources, proposed development for visitor services and facilities, proposed access and circulation routes and transportation facilities, programs and methods for protecting the culture of local residents, plans for acquiring land or modifying boundaries, methods for ensuring that uses of private lands are compatible with the purposes of the unit, and opportunities for mutually beneficial cooperation with other regional landowners.

### NPS PLANNING DOCUMENTS

The National Park Service planning process for each park (preserve, monument, or other unit of the system) involves a number of stages, progressing from the formulation of broad objectives, through decisions about what general management direction should be followed to achieve the objectives, to formulation of detailed actions for implementing specific components of the general management plan.

The general management plan addresses topics of resource management, visitor use, park operations, and development in general terms. The goal of this plan is to establish a consensus among the National Park Service and interested agencies, groups, and individuals about the types and levels of visitor use, development, and resource protection that will occur. These decisions are based on the purpose of the park, its significant values, the activities occurring there now, and the resolution of any major issues surrounding possible land use conflicts within and adjacent to the park. The following kinds of detailed action plans are prepared concurrently with or after completion of the general management plan.

Land protection plans present approaches to private or other non-NPS lands within the boundaries of NPS units, in order to attempt to have these lands managed in as compatible a manner as possible with the planned management objectives of the park unit.

Resource management plans identify the actions that will be taken to preserve and protect natural and cultural resources. Where appropriate, one component of the environment (for example, fire management plan, river management plan, historic structure plan) may be further developed into an independent plan that becomes a part of the resource management plan.

Development concept plans establish basic types and sizes of facilities for specific locations.

Interpretive plans describe the themes and media that will be used to interpret the park's significant resources.

Wilderness suitability reviews determine which lands are suitable for inclusion in the national wilderness preservation system.

Depending largely on the complexity of individual planning efforts, action plans may or may not be prepared simultaneously with the general management plan. If they are prepared after the general plan, the NPS public involvement and cooperative planning efforts are continued until all of the implementation plans are completed.



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PLANNING TEAM, CONSULTANTS, AND CONTRIBUTORS





## CHAPTER 10

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